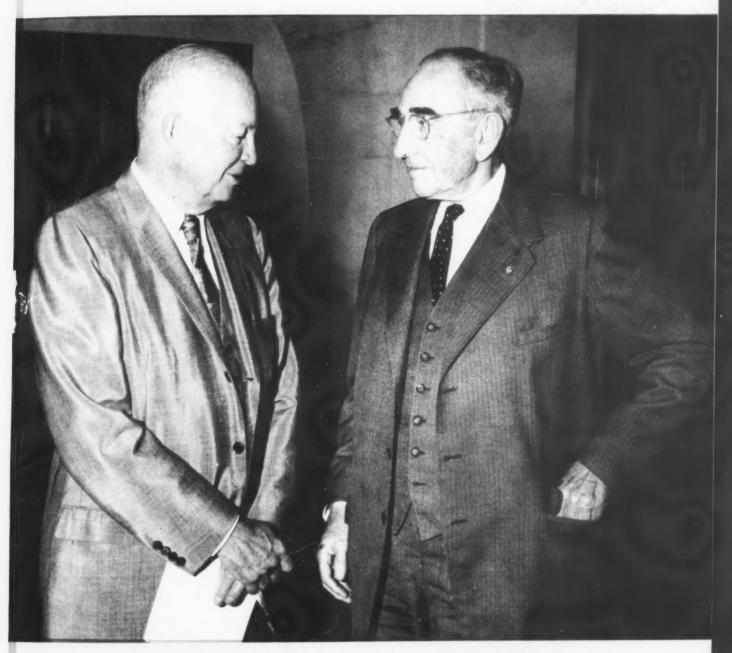
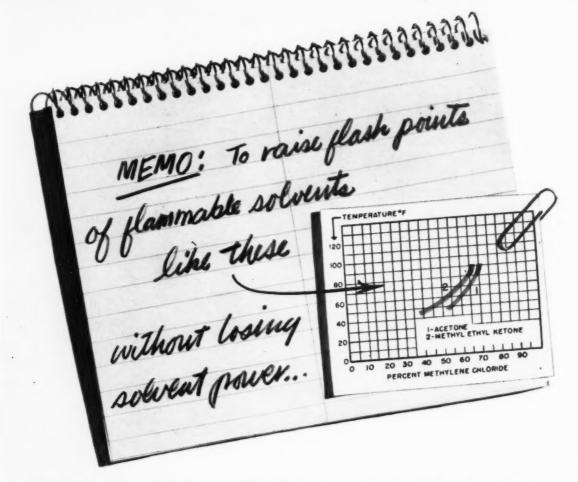
OCTOBER 1959



A president and a chairman: President Eisenhower and R. R. Deupree, chairman of Procter & Gamble Co., confer on TV and radio appeals for United Community Campaigns. Mr. Deupree is national chairman.

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Add Solvay Methylene Chloride

By adding non-flammable Solvay® Methylene Chloride to formulas containing acetone, methyl ethyl ketone, aliphatics, aromatics, alcohols and esters, your solvent can meet the I.C.C. 80°F. flash point standard. You'll do away with red labels and gain the sales appeal of safety. You'll reduce your fire insurance costs.

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*A measure of solvent power—the mm. of solvent which can be added to 20 gms. of standard kauri resin solution at 25°C, before the solution turns hazy. Higher numbers usually indicate greater solvent power.

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SOLVAY PROCESS DIVISION

61 Broadway, New York 6, N. Y.

SOLVAY PROCESS DIVISION DM-109 ALLIED CHEMICAL CORPORATION 61 Broadway, New York 6, N. Y. Please send: A. "Methylene Chloride for Raising Solvent Flash Points and its Effect in 27 Solvents"-reprint from Petroleum. Processing. B. Methylene Chloride sample. Name. Position. Company Phone Address. City_ Zone _State_

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Each of Candy's floor waxes are all-dround top enable for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

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CANDY'S SUPREME Special WR SUPER CAND-DOX®

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CANDI-COAT 1000, WATER RESIN EMULSION— As a floor coating for use under specific conditions of continued maintenance on certain types of

floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER—
For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface

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or in concentrated form for local packaging ... nothing but water to buy or mix in.

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Bright Beauty PASTE WAX—Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES—A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry cleaner" to keep surfaces wax protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH—As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX—Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove... free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom

Bright Beauty Heavy Duty PASTE CLEANER— Cleans and scours more effectively and quicker than most scouring powders. Depending on application, to describe the perfection even painted walls to provide a suitable repainting surface 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

CONTAINER SILK SCREEN LABELING—Now you can have dramatic, colorful labeling of you private brand name on all 55, 35, 30, 20 & 15 gal. drums and 3 gal. pail. This added service is accomplished right in our plant . . . your inspection—Invited . . . or white for details.

* All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Beauty and Durability

Initial appearance is important out for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety un erfoot does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason to use of a floor wax—beauty and protectiol.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance should be avoided.

Carnauba Wax

The most important features of a good wax ... all-around quality of performance ... are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

Candy & Company, Inc.

Wax Specialists for over 65 years

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MAC

Volume XXXV, No. 10 - Oct., 1950

Cover photo: President Eisenhower with Richard R. Deupree, chairman of Procter & Gamble Co., Cincinnati, on Sept. 23 made appeals via television and radio for support of United Community Campaigns of which Mr. Deupree is serving as 1959 national chairman.



MEMBER



SINCE 1934

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8

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THE HYONIC PE SERIES is a versatile group of octylphenol condensates. Their properties, determined by their ethylene oxide molarity, offer the widest range of applications in the surface-active category. For example, one is a popular emulsifier and defoamer, one is an excellent high-foaming detergent. Others are all-purpose products, characterized by superior detergency, faster wetting, and greater foaming.

Because it makes and sells a complete line of surface-active chemicals, customers have in Nopco a single source of supply. This means important savings, too—in the form of quantity discounts and lower freightage.

Write today for full particulars and samples. And remember, Nopco chemists will be glad to help you solve your individual formulating problems. Call on them freely.



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CHEMICAL NEWS stimulates profits

Profits don't just grow in the soap and chemical specialties field. They're cultivated and nurtured with a steady supply of new developments, new materials, new techniques. Chemical advancements are a major factor in stimulating this profitable growth. This series of news reports will enable you to single out the chemical news with a cash value for your field.

You may wish to check certain items in this advertisement and forward to those concerned in your company.
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POLYOL "SUPERMARKET" OFFERS WIDEST PROFIT SELECTION

From the "World's Widest Line of Polyols" at Dow, soap and chemical specialties manufacturers can select the most profitable polyols for their formulations. They save time and trouble in this one-stop shopping center for polyols. And they're the first to know when a new polyol with profit possibilities is made available.

The soap and chemical specialties industry has a hearty and diversified appetite for polyols as intermediates, plasticizers, emulsifiers, lubricants, antifoamers, solvents and other uses. That's why so many producers take their list of polyol requirements straight to the "men who make the most of

Nowhere in the world . . . literally . . can manufacturers find such a wide selection of polyols as is available from Dow. This is a convenience,

of course. But it's also profitable in other ways. The service is better. The storehouse of experience is fuller. And the newest polyols are apt to be found in the "polyol supermarket" first.

Propylene Glycol U.S.P. is a good example of why polyol business is rushing. The unequaled combination of properties of this widely used polvol has made it practically a staple item to manufacturers of many chemical specialty products.

In lotions, creams, soaps and other products, Propylene Glycol U.S.P. serves as an emulsifier aid, solvent, wetting agent, preservative . . . what-ever the script demands of this versatile performer.

Polypropylene Glycols are in demand as antifoam agents in paints and serve as lubricants and solvents in many other chemical products. In fact, chemists are able to blend polypropylene glycol properties to suit their needs, simply by combining various members of the Dow series.

Nothing to sneeze at is the possibility that glycol formulations may play a big part in new aerosols being developed as space sanitizers. Several universities have instituted and completed studies in the development of this field.

The world's widest line of polyols is getting ever wider as Dow technical service and development constantly come forth with new polyols to



Picking the right polyol can mean the difference between profit and loss to many formulators.

serve specific needs. Recent additions to the line, for example, are Hyprose®, for use as surface-active agent, intermediate, plasticizer and urethane crosslinking agent; and Hyprin®, which shows promise as plasticizer and alkyd resins intermediate.

As a basic producer of ethylene oxide and propylene oxide, Dow has been in a position to accommodate the rapidly expanding production needs for these chemicals and their derivatives. Qualified polyol experts are always available to help the customer find what he wants . . . or to help him discover what he needs from the "polyol supermarket".

AROMATICS:

they help make sales scents

The sweet smell of success for many soap and cosmetic manufacturers these days comes from the many synthetic essences produced by Dow. And though the essences are synthetic, their sales power is real.

Essences such as coumarin, Dorisyl®, Rosaryl® and Citroviol® are tempting examples of Dow aromatics which have customers following their noses back to the right shelf again and again. The stable character of these synthetic essences makes them persistent salesmen, too. They stay on the job long after more fragile fragrances may have faded and been forgotten.

Chemical inventiveness of Dow aromatic specialists continually searches for new essences to spur sales of soaps, cosmetics and perfumes . . . at a reasonable cost. At the first hint that sales are going stale, manufacturers may avail themselves of Dow's consultation service. It helps make sales scents.

DOW CHEMICALS basic to the soap industry

Raw Materials • Extractive Agents
Purifiers • Aromatics • Solvents
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Chelating Agents

Ion Exchange Resins • Alkalies Ethylene and Propylene Oxide

THE DOW CHEMICAL COMPANY Midland, Michigan



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ately hard water.

Versene 100, Versene Powder and Versene Flake are different physical forms of the tetrasodium salt of EDTA ... most effective of all commercially available chelating agents.

Startling reductions in the cost of Dow chelating agents in recent years have put them within easy reach of soap companies with hard water problems, enabling them to put soap products of competitive price and performance within the eager reach of more customers.

* * * *

If you aren't already profiting from these and other Dow chemicals, discover how you can. We suggest you write for complete information to THE DOW CHEMICAL COMPANY, Midland, Michigan, Chemicals Merchandising Department 971ER10.

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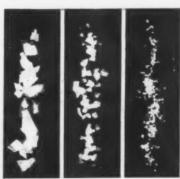
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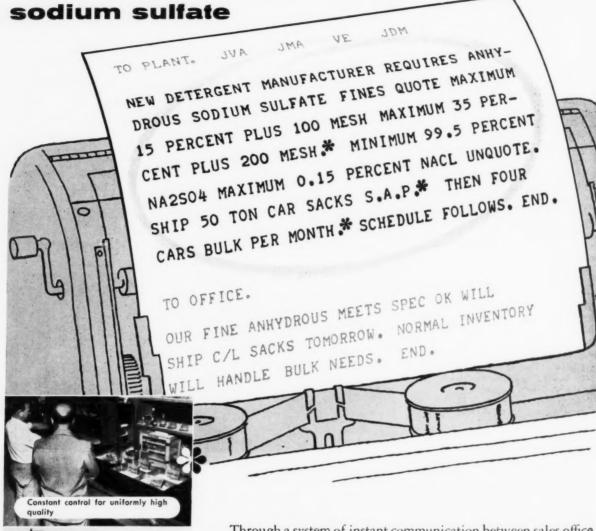
This workhorse chemical comes to customers in any form they want without delay from Dow's supply network of five producing plants and nine shipping terminals.



DOWANOL DPM

Excellent solvent characteristics of this Dow glycol ether solvent spotlight its value for heavy duty cleaning jobs such as in white sidewall tire cleaner formulations.

West End "fills the order" for special specification anhydrous





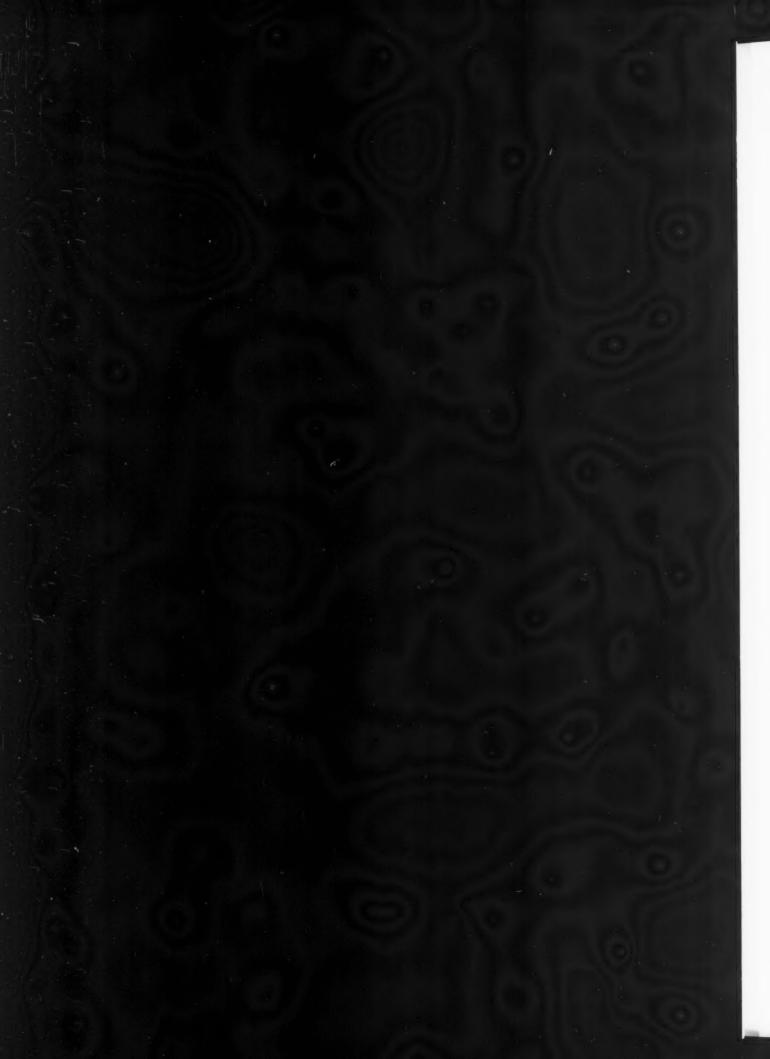
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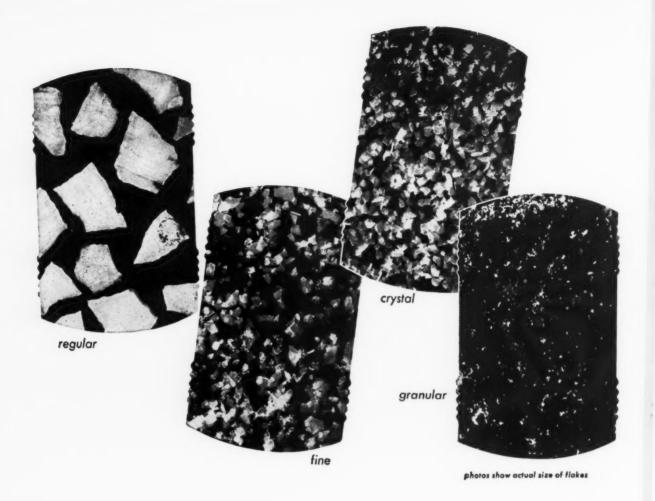


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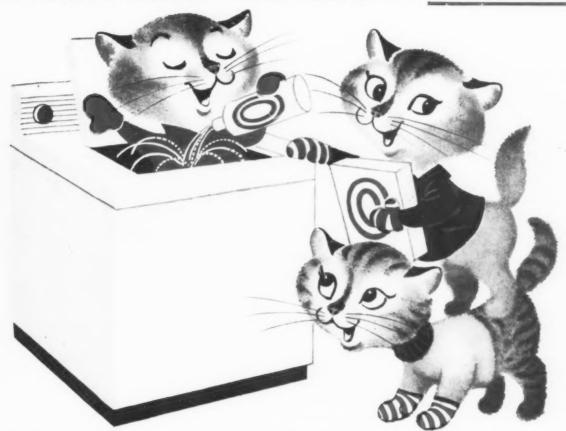
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LAUNDRY DETERGENTS!

DISHWASHING COMPOUNDS!

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Dipotassium Phosphate Monopotassium Phosphate Potassium Tripolyphosphate Tetrapotassium Pyrophosphate Tripotassium Phosphate

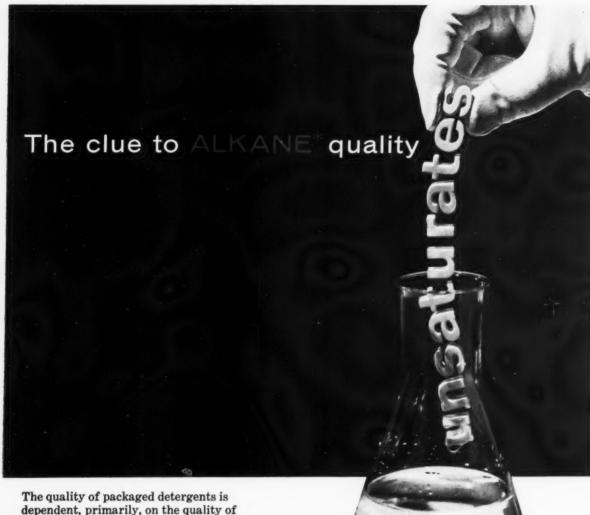


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dependent, primarily, on the quality of their alkylate raw material. And there is good reason why the best-quality sulfonates are made from Oronite's detergent alkylate ALKANE.

The clue to ALKANE quality is in its low bromine number. Highly pure ALKANE, with its low bromine number, contains an infinitesimal quantity of unsaturated impurities. This means high conversions, good sulfonate color and low unsulfonated oil.

Actually ALKANE has the lowest bromine number of all commercial dodecylbenzenes. It's your further assurance that if you use ALKANE you are using the finest detergent alkylate available.

*TM Detergent Intermediate



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After Closing

New Duties for Werner

William G. Werner, director of public and legal services for Procter & Gamble Co., Cincinnati,



William G. Werner

was transferred this month to a new assignment in charge of special services reporting to K. Y. Siddall, administrative vice-president.

The company also announced the appointment of C. C. Uhling as manager of the public relations department. He was formerly manager of the merchandising division in the advertising department.

CSMA Proceedings

Availability of the proceedings of its 45th midvear meeting has just been announced by the Chemical Specialties Manufacturers Association. The 202-page paper bound volume includes all papers, reports, and surveys presented at the meeting which was held May 18, 19 and 20 at the Drake Hotel, Chicago. Each member company and registrant at the convention receives one copy of the proceedings free of charge. Additional copies cost \$7.50 each in the United States and Canada, \$8.00 per copy in other countries. They are available from CSMA

headquarters at 50 East 41st Street, New York 17.

Dentinger Joins Mennen

Charles Dentinger joined Mennen Co., Morristown, N. J., last month as advertising manager. Previously with Wildroot Co., Buffalo, N. Y., he replaces Sylvester J. Cleary, who was recently advanced to marketing services manager.

Armour Names Linfield

Warner M. Linfield was recently appointed director of rescarch for the grocery products division of Armour and Co., Chicago. Previously Dr. Linfield was technical director of the soap division which was merged with the canned meets division earlier this year to form the grocery products unit. He joined Armour in 1955 in applied research on soap and became technical director of soap in 1958. In

A. E. Budner, of the technical service department of S. C. Johnson & Son, Inc., Racine, Wis., boarding Air France plane for trip to Europe. In Germany he will visit the Hostawax Corp. plant in Frankfurt. Also visiting the Hostawax plant to be brought up to date on the latest developments in wax technology are Daniel H. Terry, assistant director of product research and development of the Boyle Midway Division of American Home Products Corp., Cranford, N. J., and Gerard De-Napoli of Masury-Young Co., Boston.



his new post Dr. Linfield is responsible for both soap and canned meats research.

Also announced was the appointment of Eric Jungermann as manager of soap research for the grocery products division. He was formerly with Armour Industrial Chemical Co. in charge of the organic synthetic group. Edward C.



Warner M. Linfield

Beck recently joined the grocery products division in charge of analytical research. He was previously with Dow Chemical Co., Midland, Mich.

Texize Names Mayer

J. F. Mayer was recently appointed administrative assistant to T. L. Waters, general sales manager of the consumer products division of Texize Chemicals, Inc., Greenville, S. C. Most recently district sales manager in Alabama, Mr. Mayer has been with Texize since 1951. He is succeeded by R. F. Hester, who had been territory salesman in Montgomery, Ala. Mr. Hester joined Texize in 1950.

Syndet Intermediates Plant

A synthetic phenol plant is being constructed by Koninklijke Zwavelzuurfabrieken v/h Ketjen N. V. in Amsterdam, Holland. Scheduled to be on stream at the end of 1960 the plant is being engineered with an eye to easy expansion. Part of its production is destined for captive use to make phenol derivatives as intermediates

for detergents and coating resins. Some of these derivatives are already part of Ketjen's line.

Du Pont Names Stephens

Marshall A. Stephens was recently appointed manager of "Zerone" and "Zerex" anti-freeze sales in the industrial and biochemicals department of E. I. du Pont de Nemours & Co., Wilmington, Del. With the company since 1936, Mr. Stephens served most recently as manager of the anti-freeze section in the department.

Everett McMahon Dies

Everett Keith McMahon, 39, manager of chemical sales division of Tennessee Products & Chemical Corp., Nashville, Tenn., died of a heart attack on Aug. 25. Dr. McMahon had been with the company since 1949.

Colton Names Barry

The appointment of John F. Barry as sales engineer in the New York district office of Arthur Colton Co., Detroit, was announced last month by W. A. Doepel, sales manager. Formerly a sales and service engineer for Hope Machine Co., Philadelphia, acquired earlier this year by Colton, Mr. Barry now handles sales of the company's line of aerosol filling equipment, filling machines, punches and dies, and machinery for the chemical and pharmaceutical industries in New York, Philadelphia, and New Jersey sales area.

John F. Barry



CSMA Dec. Meeting Program Shapes Up

EFFICIENCY and marketing know-how are two themes to be stressed at the 46th annual meeting of the Chemical Specialties Manufacturers Association to be held at the Hotel Mayflower, Washington, D. C., Dec. 7-9.

"Time – How to Make the Most of It" will be the subject of a symposium set by the newly named Detergent and Cleaning Compounds Division (formerly Soap, Detergents, and Sanitary Chemical Products) for Tuesday Dec. 8.

Efficient use of time will be viewed from five different angles: "Research," by Daniel H. Terry of Boyle-Midway Division of American Home Products Corp.; "Purchasing" by Melvin Fuld of Fuld Brothers, Inc.; "Production" by H. L. Green of Brulin & Co.; "Marketing" by E. I. Stoltz, Adell Chemical Co.; and Distribution and Shipping" by W. Dahms, of R. M. Hollingshead Corp.

Marketing of aerosols keynotes the entire program scheduled by the Aerosol Division.

Another highlight of CSMA's 46th annual meeting will be the 30th anniversary of water emulsion floor polishes to be observed by the Waxes and Floor Finishes Division. George F. Rodewal, originator of "dry-bright" polishes will be honored at luncheon on Dec. 8.

Following are the outlines of the meeting program as far as they had been set at the time of writing. Monday, Dec. 7, will be given over to meeting of the board of governors of CSMA and to committee meetings of the six divisions of which CSMA is composed: Aerosol, Automotive, Disinfectant and Sanitizers, Insecticide, Detergent and Cleaning Compounds, and Waxes and Floor Finishes.

On Tuesday morning, Dec. 9, when the annual meeting formally opens, the Aerosol Division will hear the following presentations: "Marketing of Aerosols Directly to the Home," by D. J.

Templeton of Stanley Home Products, Inc.: "Marketing a Diverse Line of Aerosol Products," by S. C. Johnson, Jr., of S. C. Johnson & Son, Inc.; "Introducing a New Aerosol Product to the Consumer Market," by Peter Schaeffer of Glass Wax Co.; "Marketing Aerosols Through Chain Operations," by a speaker from Rexall Drug Co.; and "Study of Aerosol Distribution at Various Retail and Wholesale Levels," by a speaker yet to be announced. This program will be followed by the announcement of the aerosol packaging award winners by F. G. Lodes of Lodes Aerosol Consultants, Inc.

Also set for Tuesday morning, Dec. 8, is a symposium of the Waxes and Floor Finishes Division entitled: "Looking into the Future." Under the chairmanship of Cyril S. Kimball of Foster D. Snell, Inc., the following presentations will be offered: "Future of the American Economy," by Ira Ellis of E. I. du Pont de Nemours & Co.; "Future Trends in the Flooring Industry," by a speaker yet to be announced; and "Future Trends in the Floor Polish Industry," by J. V. Steinle of S. C. Johnson & Son, Inc.

The Detergent and Cleaning Compounds Division, meeting the morning of Dec. 8, will hold the "Time" symposium, mentioned above.

A symposium on non-agricultural spraying equipment will highlight a morning session of the Insecticide Division, Dec. 8. Philip Hauser of Root-Lowell Manufacturing Co.'s National Steelwares Division will be moderator. Titles of papers and their authors include: "Household and Dairy Sprayers." by T. B. Welsh of Gulf Oil Corp.; "Mill and Industrial Sprayers," by W. L. Brahm of B&G Co., Plumsteadville, Pa.; "Lawn and Garden Sprayers," by David Lewis, H. D. Hudson Manufacturing Co., Chicago; and "Sprayers for Parks and

Recreational Areas," by the Superintendent of Capitol Grounds, Washington, D. C.

Luncheon speaker on Tuesday, Dec. 8 will be Cameron Hawley, whose subject is: "The Quality of Leadership."

A general session will be held the morning of Wednesday, Dec. 9. Reports of the CSMA secretary, H. W. Hamilton; CSMA treasurer, P. C. Reilly, Reilly Tar & Chemical Corp.; and general counsel, John D. Conner, Cummings, Sellers, Reeves & Conner, will be presented. These will be followed by a talk by Kenneth McFarland, vice-president of General Motors Corp., whose subject has yet to be an-

nounced. Donald M. King of Masury Young Co. president of CSMA will deliver the presidential address at this session.

At luncheon Mr. King will present the 1959 CSMA Achievement award to H. W. Hamilton, association secretary. David W. Kendall, special counsel to the President of the United States will be the luncheon speaker.

The Aerosol Division meeting, the afternoon of Dec. 9, will hear Phil Libson of Max Factor on "Building Aerosol Sales through Better Packaging"; and H. E. Peterson of Peterson Filling and Packaging Co. on "New Developments in Aerosols." A symposium is sched-

uled on the subject of "Current Developments in Solubilities of Aerosol Systems." Current research developments will be covered by speakers from Union Carbide Chemicals Corp., E. I. du Pont de Nemours & Co., General Chemical Co., and Pennsalt Chemicals Corp. Listed as last speaker in this session is G. Barnett of Giant Food Stores, Landover, Md.; his subject: "What Grocery Chains Think of Aerosols."

The Detergent and Cleaning Compounds Division will also reconvene on Wednesday afternoon, Dec. 9. Two papers have so far been announced for this session: "3,5,3',4' - Tetrachlorosalicylanilide—a New Bacteriostat," by W. J. Lennon and T. E. Furia of Geigy Chemical Corp. "Protein Detergents," will be discussed by H. L. Sanders of Stepan Chemical Co. and M. Nassau of Maywood Chemical Co., a division of Stepan.

The Wax Division's program for Dec. 9 includes: "Surface Tension—Substrates and Finishes," by W. A. Zisman, U. S. Naval Research Laboratory; "Surface Tension—Pendant Drop Method," by G. J. Fuld, Massachusetts Institute of Technology; "Tall Oil Fractions in Floor Polishes," by M. G. Bestul, West Virginia Pulp and Paper Co.; "Bacteria Control in Polishes," by L. H. Perry, UBS Chemical Co.; and "Performance Evaluation," by G. Robertson of Equitable Life Insurance Co.

"Insect Resistance," will be reviewed by Robert H. Nelson, secretary of the Entomological Society of America, Washington, D. C., at the Dec. 9 session of the Insecticide Division. Morton Beroza of the Agricultural Research Service of U.S.D.A., Beltsville, Md., will be heard on "Recent Developments in Insect Attractants." T. Carter Parkinson, McCormick & Co., will speak on a marketing subject.

Award winning aerosol packages will be on display during the meeting and for the first time the Waxes and Floor Finishes Division will sponsor an exhibit of floor coverings and floor care products.

CSMA Achievement Award to Hamilton

HERBERT W. Hamilton, for many years secretary, of the Chemical Specialties Manufacturers Association has been selected to



H. W. Hamilton

receive the 1959 Achievement Award of CSMA. Mr. Hamilton, who is widely known as "Doc," was chosen to be the seventh recipient of the honor, which is presented annually for "outstanding contributions in the field of chemical specialties."

The selection of Mr. Hamilton was approved unanimously by the Board of Governors of the Chemical Specialties Manufacturers Association on recommendation of the Achievement Award Com-

mittee during its two-day meeting in New York City, September 15 and 16, 1959. Mr. Hamilton has been secretary of CSMA for nearly 20 years, initially on a voluntary basis. Since 1950 he has been employed by the Association as general manager and secretary. The CSMA presntly has over 400 members. In 1928 and 1929 Mr. Hamilton was president of CSMA, then known as the National Association of Insecticide & Disinfectant Manufacturers. He served for several years on the Board of Governors before and after his term as president. For several years before becoming secretary he was chairman of an Executive Office Committee.

A graduate of Bates College, Class of 1914, Mr. Hamilton taught school in Attleboro, Mass., before attending Massachusetts Institute of Technology, where he received another degree and where he later did research work. He received his commission in the U.S. Army as a Lieutenant in November 1917 and served overseas with the Sanitary Corps during World War I from January 1918 until August 1919. He was with the U.S. Army Laboratory No. 1, an advance unit. Mr. Hamilton eventually was advanced to the rank of Captain.

New Pyrethrum Synergist

A new pyrethrum synergist especially suitable for incorporation in pressure packaged insecticide formulations has been developed by Badische Anilin & Soda Fabrik, Ludwigshafen am Rhein, Germany. Covered by German patent No. 1,029,189 (Sept. 16, 1958) the compound is described as a chlorinated aliphatic ether having at least four chlorine atoms in the molecule. "Synergist 421" is said to offer olfactory and economic advantages over piperonyl butoxide, while being its equal as a toxicant. The new compound is 2,3,3,-3,2',3'3'3' - octachlorodipropylether. Used in combination with allethrin or pyrethrum in aerosol formulations pressurized with vinylchloride the new synergist is as effective as piperonyl butoxide, the BASF patent claims, which refers to U.S. patents Nos. 2,323,658; 2,303,683 and French patent No. 1,041,331.

Optimum results are obtained with eight to ten parts by weight of "Synergist 421" for one part of pyrethrum (100 per cent), which approaches the optimum use concentration of piperonyl butoxide. The new material is said to have a pleasant sweet smell and its addition to lindane/pyrethrum combinations is claimed to constitute a considerable olfactory improvement over piperonyl butoxide used in similar formulations.

In 1958 the new synergist was first incorporated in a commercial aerosol insecticide marketed in Germany, Switzerland, and Sweden. Reports indicate that the new synergist is equal to piperonyl butoxide when used against fruit flies, house flies and roaches, and somewhat superior in ant control. Hans Kuebler, Seifen-Oele-Fette-Wachse, No. 13, June 24, 1959, pp. 393-5.

ATI Advances Philipson

Davis Philipson, assistant director of purchasing, has been advanced to director of purchasing for Aerosol Techniques, Inc., Bridgeport, Conn., it was announced last month by H. R. Shepherd, president. In his new post, Mr. Philipson is in charge of all pur-



Davis Philipson

chases of production components for the aerosol packaging company. He has been in the purchasing field since 1950. His former associations include Powr Pak, Inc., Bridgeport, Casco Products and A. C. Gilbert Co., New Haven. A native of New Haven, he is a graduate of Franklin & Marshall, and served overseas with the Medical Corps during World War II.

──★─ Williams Named Director

William E. Williams, president of Procter & Gamble Co. of Canada, Ltd., Toronto, Ont., was recently named a director of Toronto, Hamilton & Buffalo Railway, Hamilton, Ont.

New CSMA Constitution

A copy of the recently adopted revisions to the by-laws and constitution of the Chemical Specialties Manufacturers Association was distributed recently. The principal change in the constituton deals with active membership. Under the revised definition, firms which supply equipment, devices, containers or other material or services to manufacturers of chemical specialties are elegible to become active members.

New DuBois Trade Mark

A new red and black trade mark design was adopted recently by DuBois Co., Cincinnati, and has been painted on the company's plant. Replacing the old gear-shaped symbol, the new mark will appear on the firm's packages, and in advertising and literature.

Shorey Wins BIMS Trophy

Seth Shorey of Monsanto Chemical Co. won the C. P. Seavern Memorial Trophy for the second time last month at the final outing of the season for BIMS of Boston. The event was held at the Nashua Country Club, Nashua, N. H. D. J. O'Connell of Howe & French, Inc., scored low gross. Other winners were George D. Moriarity, John H. Breck, Inc.; Thomas J. Conlon, Northeast Chemical Co.; and F. J. Hailer, Jr., Ungerer & Co.

Seth U. Shorey, center, of Monsanto Chemical Co., receives the third annual C. P. Seaverns Memorial Trophy at BIMS of Boston's Sept. 16th golf outing at Ngshua Country Club, Nashua, N. H., from previous winner, A. L. Weston, BB Chemical Co. Looking on, left to right, are M. E. Nourse, Howe & French, Inc.: Hart Harris, Jr., S. B. Penick & Co.; and D. J. O'Connell, Howe & French, Inc.



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Highest degree of water-solubility

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Soluble in water and water-miscible solvents Equally effective as BC-840 in liquid manual-dishwashing formulations, but easier to handle because it is liquid at room temperature and less viscous. Excellent emulsifier and solubilizer for aromatic solvents, fats, essential oils, and waxes.

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Low-foaming detergent and wetting agent for use in mechanical-dishwashing formulations. Excellent for wool scouring and other degreasing formulations.

Emulphogene BC-420 INTERMEDIATE AND EMULSIFIER

Insoluble in water. Soluble or dispersible in petroleumbased solvents

than BC-420

Oil dispersible

Intermediate for high-foaming anionic surfactants of the water-soluble sulfate ester type. Emulsifier for white oil, kerosene, and other petroleum fractions.

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Emersol Oleic Acid ends odor problem caused by rancidity



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The problem, several years ago, was simply oleic acid rancidity. The firm tried another oleic acid.

And another.

Finally, Emersol 233 LL Elaine.

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So they switched to buying Emersol 233 exclusively. And, their subsequent checks on a host of competitive oleic acids have borne out their earlier judgment—Emersol 233, with a polyunsaturate content of less than 5%, has far greater resistance to rancidity than any other oleic on the market.

The other superior qualities of Emersol 233 were incidental to this company. But if your particular oleic acid problems involve color, color stability, or purity, you too are very likely to find the answer in the across-the-board top quality specifications of Emersol 233 LL Elaine. And it costs not a penny more than competitive grades. Write Dept. 8-10 for an evaluation sample or a 20-page comprehensive booklet on oleic acids.



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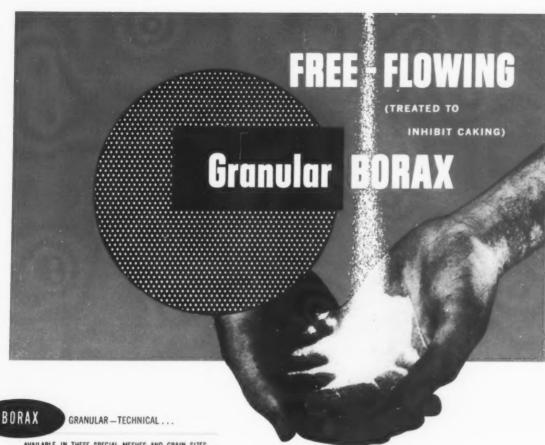
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Granular 8/40 (Special Mesh)	+ 8 + 40	Nil 96.8%	+ 45	min. 95°
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Granular 30/60 (Special Mesh)	+ 30	0.5% 69.8%	+ 30 +100	max. 19 min. 809
Granular 30/70 (Special Mesh)	+ 30 + 70	0.3% 71.0%	+ 301	max. 19
Granular 30/80 (Special Mesh)	+ 30 + 80	0.8% 76.6%	+ 30	max. 19
Granular 30/100 (Special Mesh)	+ 30 + 100	Nil 86.7%	+ 35 + 100	none min. 85%
Granular 40, 100 (Special Mesh)	+ 40 + 100	Nil 89 0%	+ 40 +100	max.0.5% min. 88%
Granular 40/140 (Special Mesh)	+ 40 + 140	0.1% 88.8%	+ 35 +100	none min. 50%
Granular 40/200 (Special Mesh)	+ 40 + 200	0.1%	+ 30	none
Granular 48/200 (Special Mesh)	+ 60	0.1%	+ 60	max. 1%
Granular 80/200 (Special Mesh)	+ 80 + 200	2.0%	+ 40	none max. 5%

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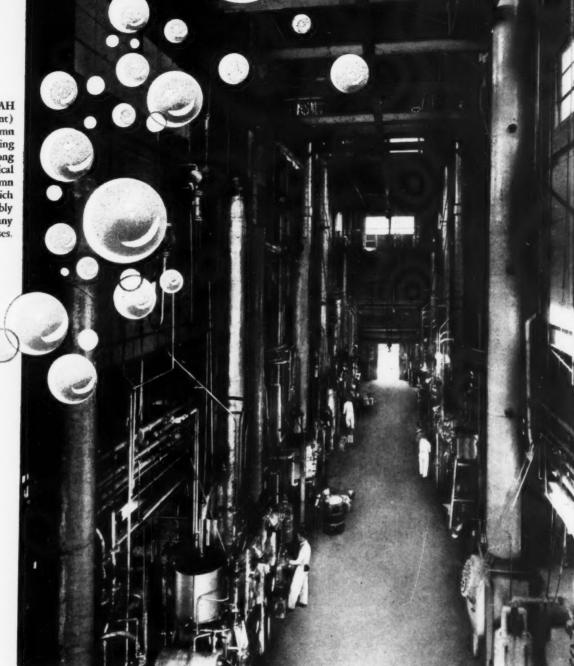
when borax is part of their make-up. They work better in any water - cut grease quicker - and feel smoother. Our granular borax is free-flowing and 100% soluble. This material is now available to you in any of the many special uniform meshes listed at left. Samples, bulletins, or technical advice can be obtained from the sales office nearest to you. Write today!





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90% Minimum active dodecyl benzene sodium sulfonate flake

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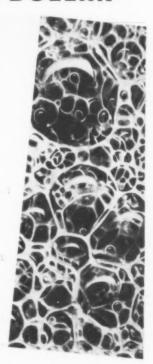
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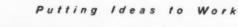
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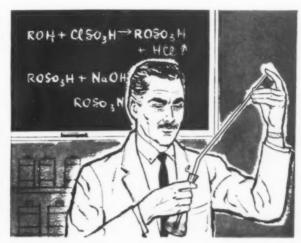
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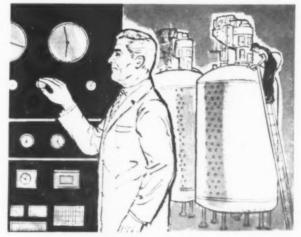
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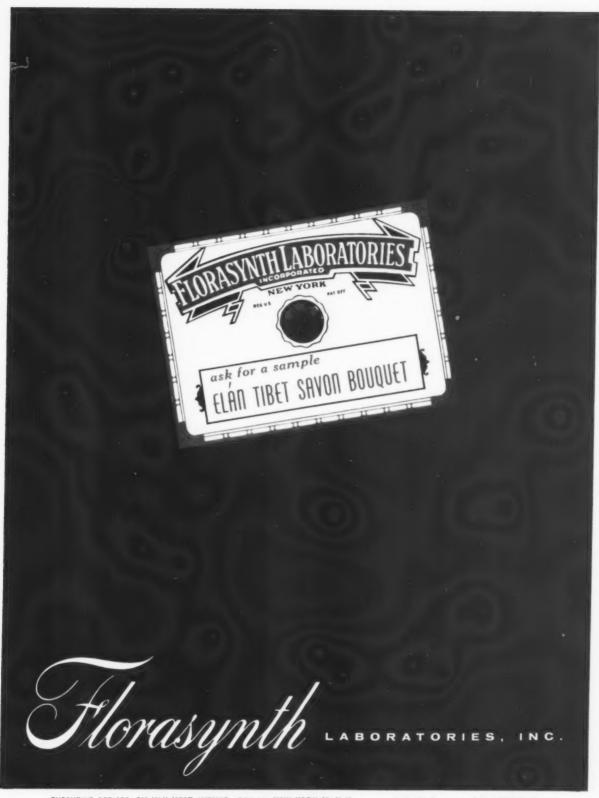
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...IN BRIEF

as the editor sees it . . .

GLYCERINE... A recent advance in the price of glycerine of 1½ cents per pound by producers of the synthetic product marks the first price change in over three years. The last time glycerine prices were revised, it was a two-cent reduction in August, 1956. As soap production has shrunk over recent years, so has natural glycerine output. Although soap kettle glycerine is still a considerable tonnage, it has to take something of a back seat as synthetic glycerine grows. Two synthetic producers are now expanding plant facilities further. And the long-range consumption chart for glycerine shows a continuation of the uptrend.

When the first synthetic glycerine plant was put into operation, some market authorities anticipated a war between soapers and the synthetic producer. Not much of note happened. If anything, the advent of synthetic glycerine stabilized the market. Sharp price changes and speculative activity of some years ago seemed to vanish. Prices settled down at a sensible level and have stayed there. Consumption has continued to grow. Price levels have encouraged this growth and have furthermore tended to discourage inroads of substitutes. The market position of glycerine at this writing looks as solid as a rock.

AH, VICTORY! It was a great victory for the floor wax manufacturers. The hallowed floors of the new senate office building in Washington shall not be covered with carpet. By a vote of 31 U. S. Senators, the rubber tile floors in the building shall be protected with no-slip floor wax. Carpet was voted down, thus saving the great American sucker, the taxpayer, something like \$100,000. Just a mere pittance in Washington, but withal a great moral victory for economy and floor wax.

Leaders in this fight for floor wax were Senators Proxmire and Douglas. We understood that the carpet money had already been appropriated. But this did not daunt these two great battlers. A couple of months ago, they staged a demonstration in behalf of non-skid floor wax with news reporters scribbling and television and movie cameras grinding away. Wax manufacturers were there too watching over their products. It was a convincing demonstration. And 29 other senators were assured that their secretaries shod in high heels would not fall on their fannies by merely walking across the floor.

Maybe the publicity which the Proxmire-Douglas stunt attracted scared the pants off the other 29 senators. We don't know. We just surmise. At any rate, it was a great victory for floor wax. Now if these Washington secretaries would quit wearing "stiletto heels," everything would be just ducky.

LABELS.... Some time we sit back and wonder if all the laws and regulations which have been proposed as precautionary labeling measures really will do much good if and when they are adopted. As we have said a dozen times, it is impossible to circumvent human carelessness by legislation or regulation. And human carelessness lies at the root of the great majority of accidental poisoning cases. People knowing that a product may be hazardous will still leave it standing in a kitchen closet or in the garage in unlabeled soda pop or milk bottles. They will still leave hazardous substances within easy reach of children.

Then there are hundreds of small manufacturers who will completely ignore precautionary labeling regulations. If past experience is a



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criterion, many of them will not even know that such regulations exist. In their sublime ignorance, they flout other laws. Why will precautionary labeling laws be any different? Again it looks like an educational problem.

Maybe the thousands of man-hours which have been spent by representatives of manufacturers, trade associations and legislators to protect the public against its own carelessness may in time bear fruit. We sincerely hope so. But viewing the problem as a whole gives us a feeling of frustration. New laws, new regulations may help in some vague, remote manner. Thus, we feel that the Federal Hazardous Substances Bill should be passed. What it can and will accomplish remains to be seen.

JOLT When the cast of the Broadway musical hit, "Music Man," went out on strike against filthy toilets, dirty dressing rooms and unsanitary conditions generally backstage, it marked the first time, to our knowledge, a labor dispute actually was set off because of lack of sanitation. It gave many people, even those in the chemical specialties business who make cleaners, disinfectants, and deodorizers, a jolt. It should have made them realize, if they didn't already suspect, that cleaning and maintenance products are important. So important, in fact, that some unions are spelling out in their contracts what are acceptable minimum standards of sanitation. Makers and sellers of sanitary chemicals would do well to take a peek at some of these contracts and acquaint themselves, and management, with what sanitation products are called for.

Specialties Manufacturers Association is on record as opposed to any and all product certification by trade association or other groups. The matter of having products tested and certified by various associations has been kicked around for several years by CSMA committees and the board. Now CSMA has issued a bulletin reiterating its opposition and outlining a suggested procedure for individual suppliers to

follow in refusing to have their products certified.

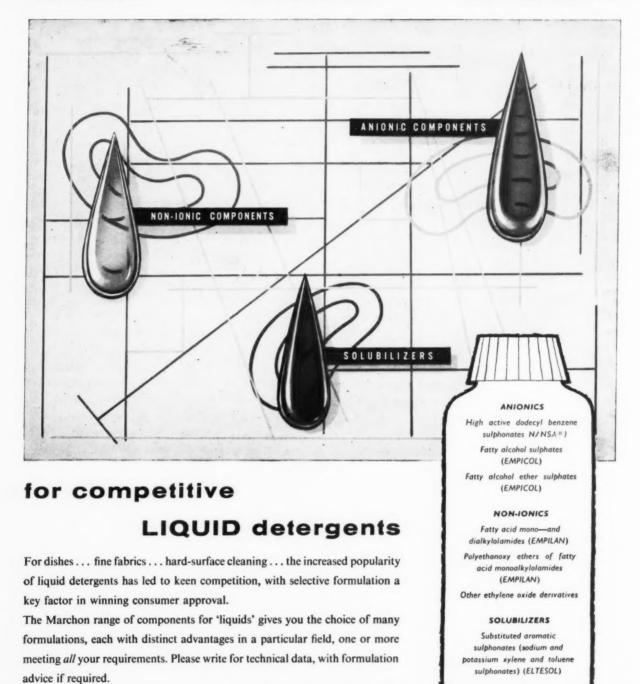
A few of the points which CSMA makes are quite well known, — every manufacturer is responsible for his products and claims made for them, cost of certification must be added to the price, many products to be certified are already controlled by federal and state laws, products can be checked against specifications issued by any association, certification by an association carries no assurance that trouble will not develop with the product or that it actually meets specifications.

No mention is made of the contention that only a small sample submitted by the supplier is tested for certification. Shipments which can run into the thousands of gallons or pounds, may or may not meet specifications. Who is to know unless every shipment is tested?

GIFTS... Each year along about this time, Santa Claus usually gets a kick in the pants. Generally it is in the form of notices sent out principally by large companies warning suppliers not to send their employes Christmas gifts. And the intimation is sometimes there that such gifts are viewed as an attempt to bribe their employes. In a few instances, it is plainly stated that any such gifts will be returned pronto by the recipients. Coming as these notices do a month or so in advance of the gay holiday season, they cast a sort of grey pall over things.

So, imagine our surprise when we get a release from the Business Goodwill Advisory Council in Washington discussing the significant topic, "Business Gifts at Christmas — Good or Bad?" The mere fact that somebody might consider for a minute that there could be anything good about business Christmas gifts came as a shock. Then the Council goes on to warn against expensive gifts. We suppose that they mean no pianos, sports cars or bedroom suites. Gifts, they say, should be geared to individual tastes and be useful. Maybe a carton of cigarettes or an appointment book of which the recipient will probably receive two dozen.

We never heard of the Goodwill Advisory Council. But maybe they got something.



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as the reader sees it . . .

"Surprised and Delighted" Editor:

In reviewing the August issue of Soap & Chemical Specialties we were both surprised and delighted to find a story on our "Centripure" process on page 133.

Though this process has been given wide editorial mention, we were extremely pleased to find that a magazine of such authority in the soap industry found the process worthy of several pages of editorial mention.

No need to mention that we have already initiated an order for reprints, as we're sure they'll be of good value to us.

Robert R. Kubick, Asst. Advertising Manager, DeLaval Separator Co. Poughkeepsic, N. Y.

Credits . . .

Editor:

In all the published reports of the recent hearings on Senate Bill S. 1283 ("Federal Hazardous Substances Labeling Act") little, if any, mention was made of the different individuals whose contributions made the event (the hearing of August 13, 1959) possible.

While it would be impractical to give credit to every person who was active either directly on the CSMA's Precautionary Labeling Committee, or indirectly by representing another organization at some joint committee meeting, I believe that the following should be singled out for mention:

Mr. Robert L. Ackerly of CSMA counsel devoted not only considerable time and labor to the bill itself, but he also held numerous discussions with representatives of the several industries affected, and with Government authorities who would be involved in enforcement actions after the bill's enactment into law. His great skill as

a lawyer, his unfailing patience and courtesy impressed all who worked with him.

A piece of proposed legislation of the type of S. 1283 is but the culmination of a long collaborative activity by experts from many different fields, including chemists, physicians, pharmacologists and toxicologists, in addition to experts on Federal and related legislation. The pattern of the required harmonious cooperation

Marshall S. Lachner, president of B. T. Babbitt, Inc.. New York, and founder of the "Own a Bit of America" (OBA) program, testifies at recent Congressional hearing. The hearing, before the subcommittee of the Judiciary, was on H. R. 8107. This bill, introduced by Congressman Abraham C. Multer of Brooklyn, would have prohibited the use of U. S. Savings Stamps as premiums for household products.

At the hearing Mr. Lachner described the Brooklyn Congressman's allegations of "fraud" and "racket" to describe the OBA program through which consumers receive free U. S. Savings Stamps, as "reckless" and "based upon misstatements and half truths." Mr. Lachner also challenged the Congressman to "repeat those reckless allegations outside the area of his Congressional immunity."

The subcommittee voted down H.R. 8107.



was achieved under the capable guidance of Dr. A. Haldane Gee, the former chairman of CSMA's Precautionary Labeling Committee.

Without the efficient recording and abstracting work of Mr. Stefan M. Stein, it would have been virtually impossible to systematize the different subjects which came up for discussion at the numerous successive meetings of the Committee.

Mr. George T. Scriba, vicechairman, Mr. N. M. Walker, Mr. Sanford J. Hill, Mr. Robert J. Morse, and Mr. George Hopper gave the Committee the benefit of their legal learning and experience in the area of cautionary labeling. Doctors J. W. Osborne and Th. W. Nale spent many hours with the Committee guiding it through the intricacies of toxicology and pharmacology.

Mr. Earl Brenn and Mr. William S. Jessop gave much time and effort to the preparation of a manual for precautionary labeling which is to be published in the near future.

Last, but not least, one should pay grateful tribute to the U.S. Government representatives whose valuable advice helped to channel the Committee's work. Messrs. Harvey, Ellenbogen, Rankin, Goodrich and Dr. Lehman of the Department of Health, Education and Welfare, and Mr. Justus Ward of the U.S. Department of Agriculture are only some of those who should be mentioned in this connection.

All these gentlemen, as well as the unnamed others who participated in the work of the Precautionary Labeling Committee, deserve the gratitude of the entire membership of the CSMA, as well as that of the other industrial organizations interested in this legislations

I consider it a most pleasant duty to express heartfelt thanks to all those within our group as well as outside of it, who through their

(Turn to Page 123)

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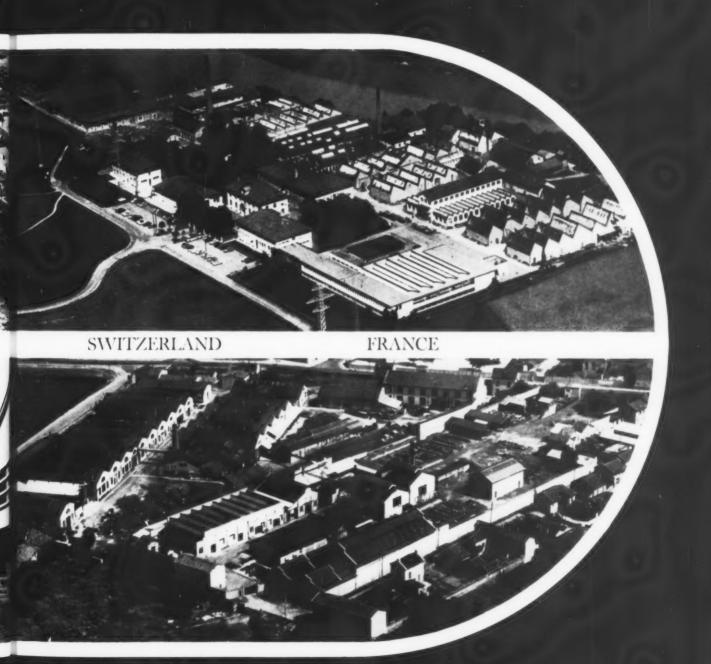


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Toilet soaps and other detergent and soap products High speed filling lines turn out growing stream of private label liquid synthetic detergents at plant of Curley Co.. Philadelphia. large private label packager. New equipment was installed by Curley recently to handle increasing orders from chain and independent supermarket operators and wholesalers. See article beginning on page 51.





Blockson man examines a detergent compound improved by Sodium Tripolyphosphate.

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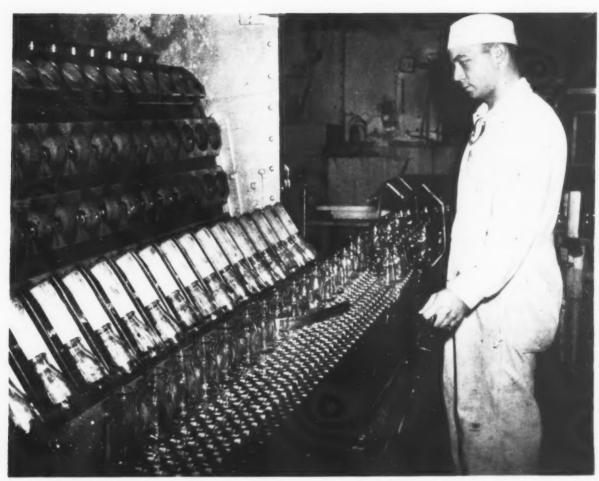
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water can be overcome by the addition of small amounts of gluconic acid or sodium gluconate. Greater efficiency results.

Gluconates in Alkaline Cleaners

RGANIC sequestrants, because of their ability to inactivate metal ion impurities as well as hard water consitutents, are valuable as additives to a variety of cleaning compounds. Among the sequestrants at the formulator's disposal gluconic acid and its salts combine great versatility with low cost.

First isolated in 1878 by Boutroux (1) during his investigations of lactic acid fermentations, gluconic acid did not become available in commercial quantities until the early 1930's. Gluconic acid is at present produced by fermentative oxidation of the aldehyde group in glucose to give the characteristic carboxyl group of the acid. This acid and its derivatives, which first became important chemicals in the pharmaceutical, food and feed fields, have in recent years established their position in various industrial cleaning operations.

In the cleaning field, considerable use has been made of the gluconates because of their sequestering action in alkaline media. Since sodium hydroxide is the main ingredient of many alkaline cleaners, particularly bottle-washing compounds, there is a tendency for a heavy scale to form on the washer especially when relatively hard water is used. It has been found that this scale problem can be controlled by the addition of small

By T. A. Downey and J. J. McCallion

Chas. Pfizer & Co., Inc. Brooklyn, N. Y.

Table I. Minimum Quantities of Gluconate Required for Various Degrees of Water Hardness.

Sodium gluconate required per 100 pounds caustic

soda at caustic concentrations of

Vater Hardness	(as CaCO:)	1%	2%	3%	4%	5%
grains/gal.	ppm	lb.	lb.	lb.	lb.	lb.
2	34	0.70	0.35	0.23	0.18	0.14
4	68	1.35	0.68	0.45	0.34	0.27
6	103	2.05	1.03	0.68	0.51	0.41
8	137	2.75	1.38	0.92	0.69	0.55
10	171	3.40	1.70	1.13	0.85	0.68
12	205	4.10	2.05	1.37	1.03	0.82
14	239	4.80	2.40	1.60	1.20	0.96
16	273	5.45	2.73	1 82	1.36	1.09
18	308	6.15	3.08	2.05	1.54	1.23
20	342	6.85	3.43	2.28	1.71	1.37

amounts of gluconic acid or sodium gluconate, thus permitting greater efficiency of operation.

Gluconic acid is also widely used in the dairy industry to remove milkstone and as an acid constituent in milk can cleaners (2, 3). Metal cleaning compounds containing gluconic acid have also been developed (4). This acid has been shown to be effective in the removal of beerstone films, a problem confronting many brewers (5).

Gluconic acid and its derivatives, particularly sodium gluconate, have also found application in water treatment as a means of inhibiting corrosion and tuberculation (6).

The basic function of a sequestrant is metal control. Gluconic acid and its derivatives, particularly the alkali salts, are capable of forming water-soluble chelates with certain metallic ions. The gluconate ion forms stable chelates with calcium and the other alkaline earth metals in caustic solutions. Gluconate ion will chelate iron, copper and aluminum over a fairly wide pH range as well as in caustic solutions.

Bottle Washing

Bottles used by the dairy, brewing and soft-drink industries are customarily returned for reuse. Such bottles must be washed and cleaned of surface soils and residual materials to conform to standards established by state and municipal law. Such regulations usually pro-

vide that a hot solution of about three per cent caustic soda must be used by bottle washing shops.

The water used in bottle washing shops often contains calcium and magnesium ions, which form precipitates in caustic solutions causing:

- 1. scale build-up on the chain
- 2. scale build-up on the heating coils
- 3. film deposits on the bottles

The end result of this precipitation is increased bottle rejects, decreased chain efficiency and inadequate heating.

Table I gives the minimum quantities of gluconate necessary to chelate the calcium and magnesium in waters of various degrees of hardness. These quantities are based on the fact that gluconate will sequester calcium and magnesium on a mole-to-mole basis in caustic solutions. This means that a given weight of gluconate will keep a given weight of calcium and magnesium in a soluble state, thus preventing precipitation. Ap-

proximately 100 parts of gluconate will sequester 20 parts of calcium; and if the water hardness is known, the amount of gluconate to add to the soaker can be determined. Water hardness is usually expressed in terms of calcium carbonate—40 per cent of which is calcium. One grain hardness is equivalent to 17 ppm CaCO₃.

Since there are other factors involved in bottle washing, the minimum quantities of gluconate will not always solve all problems. Suggested starting levels of gluconate, as shown in Table II, should be enough to prevent scale and film, remove rust from necks and aid in label pigment removal. With a little practical experience, formulators can tailor-make compounds for wide areas. Experience has shown that a compound containing 3.5 per cent gluconate based on the weight of caustic is a good average level for formulations.

Before sodium gluconate or gluconic acid is used in any caustic bottle-washing solutions, the equipment should be thoroughly descaled using inhibited acid according to standard industry practice. Scale removal serves two purposes: first, it cleans the equipment and permits it to be checked for any malfunctioning: and second, it reduces the consumption of gluconate and caustic. If the scale is allowed to remain on the machine, it will gradually dissolve in the gluconatecaustic solution, thereby reducing the effective concentration of the gluconate in the soaker.

Sodium gluconate, specifically the gluconate anion, is an excellent ferric ion sequestrant in alkaline and highly caustic solu-

Table II. Average Levels of Gluconate Required in Practice

Sodium gluconate required per 100 pounds caustic soda at caustic concentrations of

Water Hardness	1%	2%	3%	4%	5%
grains/gal	lb.	lb.	ib.	Ib.	Ib.
1 to 5	2.0	1.0	1.0	0.5	0.5
6 to 10	5.5	3.0	2.0	1.5	. 1.0
11 to 15	9.0	4.5	3.0	2.0	2.0
16 to 20	12.5	6.0	4.0	3.0	2.5
20 or over	14.0	7.0	5.0	3.5	3.0

tions. In addition to preventing insoluble iron salts from forming in caustic soda solutions, gluconate will readily remove rust and scale from ferrous metal parts by dissolution and undercutting. The rust dissolving power is due to its ability to react with the iron oxides present in rust, forming a caustic-soluble, ferric-gluconate chelate.

Since only the iron oxides are dissolved, there is no attack on the base ferrous metal nor is there any possibility of hydrogen embrittlement when soak solutions of caustic-gluconate are used in rust and scale removal. Chromate and phosphate films can also be removed from steel surfaces by a caustic-gluconate solution.

Table III shows a general

Table III.

Sodium hydroxide	55 — 90%
Sodium gluconate	10 — 30%
Wetting agent	1 — 3%
(caustic-stable)	
Dispersing agent	2 — 8%
(caustic-stable)	
Concentration	8 — 48 oz./gal
Temperature	140°F to boiling

soak formulation effective in removing rust, scale, phosphate coatings and smut without attacking the base ferrous metal. It can be seen that the concentration, temperature and time required depend on the nature and extent of the rust and scale to be removed. A formulator should have no problem in arriving at a suitable composition by using the suggested proportions as a guide.

The formulation in Table III can be modified for electrolytic derusting by omitting the wetting agent. Table IV reproduces a Military Purchase Description for an alkaline immersion, rust-removing formulation (7).

Table IV. (7)

Additive	% by Weight	
Sodium gluconate	32 (minimum)	
Sodium hydroxide	54 — 56	
Sodium carbonate	8 — 10	
Organic wetting		
agent	2 (minimum)	
(sulfonated castor		

Gluconate-caustic compounds



Gluconic acid is an efficient acid cleaning agent for aluminum metals and has an important advantage over other acids in that base metal corrosion is much lower.

are also used very effectively in the cleaning of cast iron-glass forming molds (8), and have shown promise for alkaline barrel reconditioning.

Paint Stripping

A dry formulation which will remove paint from ferrous metal parts (9) is shown in Table V. The presence of gluconate facilitates the rate and efficiency of the paint removal. This mixture is normally used at a concentration of one to two pounds per gallon of water at temperatures above 200-F.

Table V. (9)

Additive	% by Weigh
Sodium bichromate	2
Sodium hydroxide	85
Sodium gluconate	3
Sodium lignosulfonate	6
Cresylic acid	3
"Nacconol"*	1

*National Aniline Division, Allied Chemical Corp., New York,

A liquid paint removal compound for ferrous metal parts may be compounded by using Table VI as a guide. Potassium hydroxide is preferred to sodium hydroxide, since the sodium salt of cresylic acid has a tendency to salt out at lower temperatures. In using the data given it must be kept in mind that the formulations are suggested

Table VI.

Additive	% by Weight
Potassium hydroxide	25 - 30
Gluconic acid	3 — 6
Cresylic acid	3 — 5
Water	55 - 70

starting points, and may be modified according to type of paint to be removed and the time required for adequate removal.

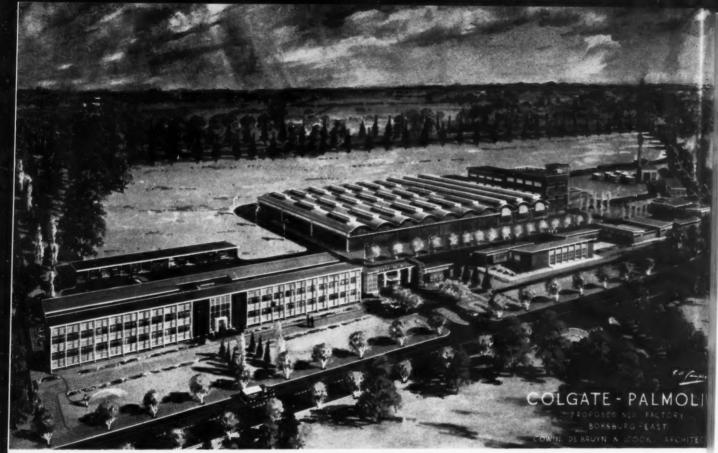
Aluminum Cleaning

Chemical cleaning methods aluminum and aluminum allovs require careful consideration because of the presence of aluminum oxide films and the reactivity and softness of the underlying metal. This reactivity of aluminum, even to the atmosphere, results in the formation of resistant, inert, protective films of aluminum oxide which absorb dirt and grime. Harsh cleaners, such as mineral acids, attack the aluminum; and many alkaline cleaners do not sufficiently remove the oxide film to permit the full brightening of the aluminum surface.

Gluconic acid is an efficient acid cleaning agent for aluminum metals, and has an important advantage over other acids in that base metal corrosion is much lower. Fermenter tanks in breweries have been effectively cleaned with a four

(Turn to Page 58)

oil or equivalent)



Artist's rendering of new headquarters and plant of Colgate-Palmolive, Ltd., in Boksburg E., South Africa. Facilities, which

include executive offices, were completed late last year. Products manufactured at plant: toilet articles, soaps, cleansers.

South African Soap Industry

By Helmut Hansel

Johannesburg, Union of South Africa

HE South African soap and toiletries market has been dominated by Lever Brothers S. A. (Pty.) Ltd., since 1914. Today Colgate-Palmolive Company's local subsidiary is endeavoring to challenge Lever's position. In addition, Gillette, Revlon and a number of other firms are showing interest in the growing South African market.

Roughly 90 tons of toilet soap was manufactured in the Union of South Africa during the year 1950-1951. Since then the demand has grown by about 15 per cent and should, today, be in the vicinity of 100 tons, valued at

£ 10,000,000.* Soap powder production in 1950-1951 amounted to approximately 10,000 tons worth £ 1,000,000. Sale of detergents has been estimated at 20,000 tons valued at £ 2,000,000 for that year. Over-all production of soap-based products during this period reached about 85,000 tons. Demand for soap products in the Union of South Africa is being met by domestic industry.

Local manufacturers agree that competition is severe. This is borne out by the advertising budgets of leading soap and toiletries firms. In 1957 South African firms reportedly spent on Springbok Radio about £ 100,000 for soap, shampoo and related advertising; £ 60,000 for dental preparations; £ 20,000 for shaving products; and about £ 40,000 for perfumes and cosmetics.

Raw Materials Sources

Some of the raw materials for the soap industry have to be imported. Most sodium carbonate for instance, is brought from natural deposits in Kenya. A new soda ash plant is being built near Sasolburg by Chemical Industries of S. A. (Pty.) Ltd., at a cost of £ 2,000,000. Scheduled to reach a

^{*}The pound is worth \$2.80.

daily capacity of 400 tons, these facilities will eventually make the Union independent of imports. About 80,000 tons of soda ash are currently being imported, mainly from I.C.L's plant at Magadi, Kenya.

Production of caustic is still short of demand. Manufacture is hampered by the chlorine supply. Of the 30,000 tons of caustic required about half is manufactured domestically in the form of 40 to 50 per cent solutions. Small quantities of solid caustic soda are also produced. Imported caustic soda is sold in the form of flakes at \$1.00 to \$6.00 a 100 pounds, c.i.f.

The domestic peanut crop handled by the Oilseed Control Board during 1957-58 amounted to 126,271 short tons of shelled nuts and 20,151 short tons of peanut oil were exported; 82,096 tons of sunflower seed were marketed during the same period. Fish oil production totalled about 26,000 tons during 1958; whale oil amounted to 7,000 tons and sperm oil to 4,000 tons. Olives have been grown successfully in South Africa since 1957, when approximately 200 tons of oil were produced. Castor oil production is another successful local experiment and 10,000 tons of castor beans were harvested

Lever Brothers S. A. (Pty.)

Ltd., is the largest soaper in the Union of South Africa with Colgate-Palmolive, Ltd., second. Smaller firms include Crystal Soap in Johannesburg and African Soap, Dominion Soap and Dell Soap in Durban. Lever makes synthetic detergents and requires 1,000 tons of dodecylbenzene a year. Sulfonators of dodecylbenzene include Savotex industries in Mariasburg and a number of other firms such as Kwikbrite and Dandy Polish. Manufacturers of special purpose detergents, such as Despa Mills which makes detergents for the woolwashing industry use mainly sodium carbonate for their products. Production of synthetic detergents in 1957 amounted to 6.800 tons.

Colgate's Position

Colgate's recent policies show clearly that it intends to compete with Lever for a goodly share of the South African market. Installation a few years ago of Colgate's continuous soap making plant at Anzio, Italy, was followed by construction of similar facilities at Boksburg, Transvaal. In production since early 1959, this new factory covers an area of 81,000 square meters and is valued at about f 1,-000,000. Plans call for manufacture of the entire Colgate-Palmolive line at Boksburg, with the exception of "Fab" and toothbrushes,



Soap and detergent use is on the increase in South Africa as well as in most other countries throughout the world. Thus the struggle for markets is intensified.

which will be imported from England. Most important Colgate products at present are dental preparations, which are said to account for 50 per cent of the South African market.

Colgate's Boksburg factory makes soap by the Sharples continuous process and can turn out about 2,500 tons of soap-based products per year on an eight hour per day basis. It should be easy to manufacture a hundred tons of toilet soap a year at this plant. Built according to the American plans the facilities hardly differ from those at Anzio, Italy. Two railway connections lead into the grounds, one of which enters the warehouse to permit loading in bad weather. About 150 to 200 people are employed at Boksburg. Time will tell whether it is economical to concentrate production in a sparsely inhabited territory such as Africa where transportation is expensive. Lever Brothers originally decentralized their soap making activities in the Union to three centers, Johannesburg, Durban, and Cape Town.

Prior to 1930 Colgate products were sold in South Africa



Sales girl in South African store holds two nationally known brands of products made and marketed in the Union of South Africa by Colgate and Lever.

only occasionally by importers. In 1930 the late L. J. Williams arrived from England and founded a South African subsidiary of Colgate-Palmolive. The firm started manufacturing activities in the Union in 1938.

Lever's history in South Africa goes back to 1891 when it appointed its first representatives in that country. In 1904 the firm built its first plant in Congella, near Durban. Today called Maydon Wharf, it is still the seat of the head offices of Lever Brothers S. A. (Pty.) Ltd. Congella offered many advantages: water, good roads, railway connections, and cheap coal. However, it was soon realized that the country was too vast to be covered from one locality. Therefore, in 1910, Lever bought a soap factory in Auckland Park, Johannesburg, and installed a third plant in 1912 at Salt River, Cape Town. Hand in hand with the erection of factories went the horticultural layout of the adjoining grounds and Lever's factories are known as the "factories in parks."

Lord Leverhulme, at a shareholders meeting in 1912, explained his thoughts about South African conditions: "It may seem unnecessary to have three factories in South Africa. However, if I explain that it requires four days to reach Cape Town from Durban and that the railway takes 24 hours from Johannesburg to Durban, and if you realise that the management has to be on the spot, then this is the only way you can conduct business there." Today air travel has changed conditions considerably; it takes only a few hours to fly from Johannesburg to Cape Town.

In the beginning, from 1910 to 1914, Lever Brothers' South African operations did not prosper. Apart from normal growing pains it had to face formidable competition by the New-Transvaal Chemical Co. This firm's main interests were in other fields with soap serving only to round out its line of products. It was therefore

able to slash soap prices at will, a bad situation for Lever which at that time was still entirely specialized in soap and soap products manufacture in South Africa.

Although Lever bought shares in the New-Transvaal Chemical Co. in 1911 it was not able to influence the other firm's policies until 1914, when it obtained the majority. Although the main shareholder of the New-Transvaal sustained losses in 1912 in fat hardening and whale fishing enterprises, these had not been severe enough to force him into selling outright.

Lever had to pay a considerable price for the New-Transvaal shares and Lord Leverhulme commented: "We certainly paid more for this business than for any other, and we undertake it only with the view of rounding off our interests in South Africa." From then on the South African operations flourished.

Today, Lever makes soaps, washing powders, dental and shaving products, margarine, edible fats and oils, and soap products as well as synthetic detergents ("Surf") from dodecylbenzene. Lever consumes about 1,000 tons of caustic soda a year, employs around 5,000 people in South Africa. It supplies 70 per cent of the South African markets in its fields.

Currently Lever Brothers is constructing fat splitting facilities costing nearly £1,500,000 at Boksburg, close to the peanut plantations at Waterburg and near the sunflower fields in the Transvaal high veld. The company recently built a most modern edible oil and fat factory at the same location. The site on which Lever's Boksburg facilities are located consists of 200,000 square meters, probably the company's largest factory site in the southern hemisphere.

Today, Lever does not have to fear a price slashing campaign on the part of Colgate, such as it experienced in 1910-1914 from New-Transvaal Chemical. But smaller firms may be affected by the competitive struggle between the two giants and resort to price cutting, which would cause temporary unrest in the otherwise stable South African price picture.

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Detergents in Sewage

Foam continues to be a serious problem at certain sewage works and on some rivers and canals in Britain, according to the Second Progress Report of the Standing Technical Committee on Synthetic Detergents. The London County Council is considering the possibility of intensive aeration of the influent to an activated sludge plant so that surface active material can be removed in the form of foam and so be kept out of the Thames. Sewage effluent sprays and the use of chemicals as foam suppressants at sewage works are under consideration.

The committee does not expect the advent of toilet bars to cause any aggravation of the problem, since their surface active ingredients are readily decomposed biologically.

Sugar based surfactants are readily broken down by bacteria, but much research is needed, the committee believes, to establish whether they are a satisfactory alternatives for currently used surfactants.

Synthetic detergents in concentrations commonly present in British sewage effluents are not likely to exert any appreciable toxic action on fish, the committe finds.

Symposium on Oils, Fats

A symposium on recent advances in the field of oils, fats and allied products has been scheduled for Oct. 25-27 at the Harcourt Butler Technological Institute, Kanpur, India. Sponsors are Oil Technologists' Assn. of India, Council of Scientific and Industrial Research, and Indian Central Oilseeds Committee. Sessions into which the symposium has been divided cover fatty acids, soaps, and detergents; production of oils and fats; and chemical analysis and testing.



To accommodate special promotion deals, Curley Company, Philadelphia contract packager specializing in liquid deter-

gents for sale under private label, installed this cluster-pack machine. Production lines flank it.

PRIVATE LABEL DETERGENTS

By Joseph J. Dragonetti

The exhibit booth of Curley Co. at the 1959 Super Market Institute, held in Atlantic City, N. J., features hundreds of private label detergents.

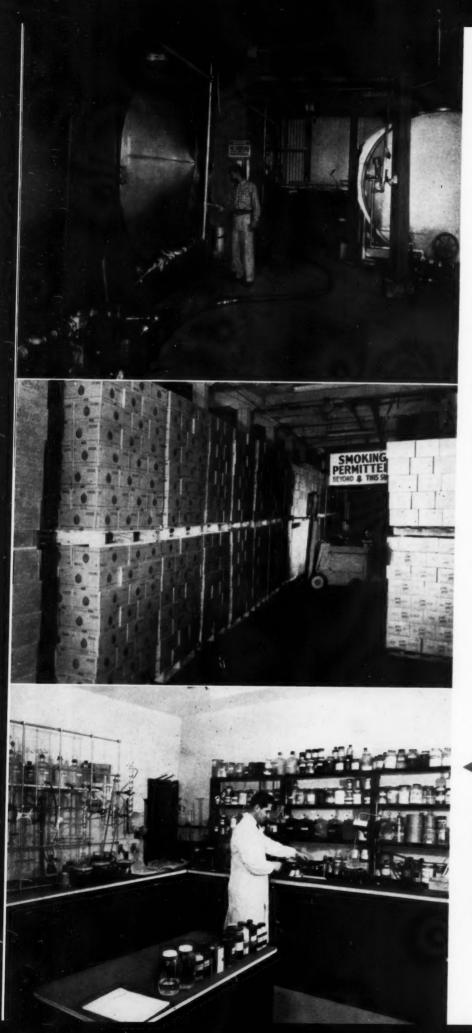
ELIABLE sources estimate that the liquid detergent market in the United States in the past decade has grown into a \$100,000,000 annual business. Moreover, private brands are enjoying an increasingly larger share of this business, mainly through supermarket sales.

One chemical specialties firm alone. Curley Co., Philadelphia, produces, packages and performs a number of other important marketing functions on behalf of over 300 private brands, mostly liquid dish washing detergents.

Curley's customers range from small to large supermarket chains, independent grocers and wholesalers.

Curley Co, this year is observing its 30th anniversary as a chemical specialties manufacturer and its 10th anniversary as a producer and packer of liquid detergents. The firm claims to be the





largest of its kind in the world, with its products distributed from coast to coast. Plant, warehousing and office facilities of Curley occupy half a city block.

Curley's business has grown so rapidly that plans are now being studied for the construction of a new, one-story plant in a suburban location. The firm's present address is 1432 N. Randolph Street in Philadelphia.

Although most of the company's machinery and other equipment have been completely modernized in the past two years, the major future need is for a more even production flow. A plant designed specifically to meet the requirements of its operation and increased volume is a must.

These and a number of other significant facts about the private label detergent business were revealed in a recent interview with Sam R. Levin, secretary-treasurer and founder of Curley Co.; Arthur Lonker, vice-president and director of sales, and Franklin Levin, president.

Not only has the company's growth been unique, but even the Curley name is unusual. The firm often receives letters addressed to the non-existent "Mr. Curley." The name derives from a wave set used for curling hair developed by the founder and produced in the early days of the company. Sam Levin had specialized in the chemical as well as the sales end of the hair preparations field. He had also made cosmetics. Ten years ago Curley Co. expanded its operation to pioneer in private label liquid detergents. Now, most of the com-

One of the tank rooms in the Curley plant is shown in top photograph.

Section of Curley warehouse appears in center photograph which adjoins loading platform in rear of plant. From here private label merchandise is shipped all over the United States.

Laboratory facilities have been considerably expanded in recent years to check on incoming raw materials and to test finished products. Here, too, standards for quality control in the manufacturing process are established.

pany's facilities are devoted to liquid detergents.

Since Curley Co. is not publicly owned, sales figures are not published. However, other factors indicate the volume of business done by the Philadelphia firm. The main plant provides approximately 75,000 square feet of floor space. Recently, the warehouse was expanded by addition of some 20,000 square feet.

All of which prompts one to ask, "what are some of the reasons for Curley's tremendous growth?"

First, the potential market for liquid synthetic detergents was (and is) large and growing. Supermarket operators recognized that liquid detergents offer housewives a new convenience, particularly packaging. Supermarket men also realized that housewives regard liquid detergents in their bright compact containers (mostly cans thus far, but with a whole host of new plastic packages in the offing) as modern products for dish washing. Somewhat selfishly, perhaps, grocers liked the idea of a container that was smaller by far than most conventional soap product packages. So small, in fact, that it would alleviate the terrific squeeze on shelf space, rather than aggravate it still further. And, finally, but by no means last, liquid detergents made under their own label gave the supermarketers an opportunity to expand their product family. In today's supermarket dog-

> Franklin Levin, President



OCTOBER, 1959

fight the chance to put one's own brand on still another item is not overlooked for a minute. And to add spice to the supermarket's affair with private label liquid detergents, to paraphrase a television show, "The Price Is Right." Private brands could be bought and sold more cheaply by the supers. This happy little economic consideration benefits grocers in two ways: 1.) They can sell their products for less, and thus build volume, and 2.) their profit margin is expanded. Best of all, even detergent and soap marketers admit that the quality of private label detergents is on a par with that of naionally advertised brands.

Getting back to reasons why in the Curley success story, as with all private label manufacturers, service is of paramount importance. Curley developed not only one of the most completely integrated private brand liquid detergent plants in the U. S., but it also provides complete service from formulation to designing a very acceptable package ready for the supermarket's shelves.

Curley service includes: 1. Complete manufacturing service;

2. Printing and supplying containers for each individual brand:

3. Filling and capping containers:

 Warehousing finished products for shipment when needed;

> Sam R. Levin. Secretary-treasurer



5. Helping the customer select his own brand name, design a trade mark, and work out copy for the label of the container; providing the service of an art and advertising department for this purpose:

6. Offering a complete printing service;

7. Providing laboratory assistance to maintain product quality through rigid control of raw materials and processing;

8. Testing the product in Curley's own household products application research division, where thousands of dishes are soiled with food products and washed to determine the effectiveness of detergents:

9. Fast delivery. Orders are filled within 24 hours from the warehouse or the production and assembly lines. Curley maintains a fleet of nine trucks of its own, as well as using common carriers.

Standard cans and products of the same formulation may be used for a number of customers, but through Curley's imprinting service, brand and company names are given individuality. Curley offers name and logo on three color cans on minimum order of 100 cases with no further commitment.

All its business is done with customers without contracts.

"We would rather keep our business," Mr. Lonker explains, "by maintaining quality and service rather than by contract."

> Arthur Lonker, Vice-president



Brand names and logos are lithographed on cans, rather than using paper labels. Art service is free. Curley's art department can prepare name or logo from layout to final process. The Philadelphia contract packager will not only custom-make a product, it will custom-design the package as well.

But certain Curley standards have to be met. If a customer's request falls below those standards, it will be turned down, because an inferior product, Mr. Lonker believes, would hurt the whole private brand liquid detergent field.

Frank Levin says that "private brands in many fields are quite common, each with its own competitive problems. The danger lies in the fact that to overcome competition many manufacturers lower quality and price as a solution, when in fact their most important obligation is to constantly improve quality."

To this Mr. Levin adds: "It is short sighted to cut quality on private brands. It gives the housewife the opportunity to complain that private brands are cheaper because the quality is not as good as that of nationally advertised products. Such complaints are dynamite. We show our customers how to avoid them. I believe that generally private brand liquid detergent manufacturers agree that quality is a must."

Incidentally, Curley Co. is an active member of the Chemical Specialties Manufacturers Association. In addition, it exhibits regularly in the shows and conventions of the Supermarket Institute. Right now, it is planning for the show scheduled to be held in Atlantic City, next May.

Mr. Lonker attributes steady growth also to the company's sales and distribution system. Curley deals exclusively with food brokers. These firms cover the whole country. Curley does not sell direct, believing that it's not sound policy "to burn the candles at both ends."

Curley does have its own sales force to assist brokers in their sales efforts. Curley salesmen make

calls with brokers, provide sales aids, etc. Currently, Curley has about 45 brokers in this coast-to-coast system.

The company makes and packs many brands in five product categories. These are liquid dish washing detergent, liquid laundry detergent, all-purpose household cleaner, fabric softener, and laundry powder.

The company serves some of the country's largest supermarket chains, including Topco, Grand Union, Food Fair and First National. Big customers also are independents and wholesalers.

"Obviously," Mr. Lonker points out, "the supermarkets are interested in private brands for practical reasons — good markup and service being the principal ones. But these are not the only ones. The store image in a chain's area is also important. Private brands enhance this image.

Liquid Market Grows

"The whole liquid detergent market itself, national brands, private brands, etc., is constantly expanding with the growth of the population. It has been estimated to be a business of approximately \$200,000,000 annually. Private brands are getting an increasingly big share of that business. It has accelerated in the past few years. More chain and independent supermarkets are adding private brands.

"These outlets stress the savings to consumers through purchase of private brands versus national counterparts. That's why I think it is so vital to maintain quality. A housewife likes to save but not at the expense of quality.

"We have offered a further incentive through the 100-case minimum order. This gives our customers a greater flexibility in inventory control and we assure them a continuous source of supply through our warehousing system. Twenty-four hour delivery is another strong point for us. In addition we provide our customers with colorful-looking packages, with top sales appeal, matching the packag-

ing techniques of national brands. All these things are important to the chain supermarkets as well as the independents."

Recently, Curley added still another important service: cluster packing, believed to be the first time this has been done in the private brand liquid detergent field.

The company takes pride in its chemical knowhow. The founder, Sam Levin, who is 58 and a native Philadelphian, studied at Central High School and Temple University.

Although not a graduate chemist, he has had a sure instinct for compounding and developing formulas for products which can do the job and sell well. This has been true in the detergent field as well as in his earlier experience with beauty products and cosmetics.

He founded his own business in 1929 in the beginning of the depression with six employes. To-day, the company often operates two shifts and has 150 employes.

Sam's brother, Franklin, who is 43, is president of the company. He is a graduate chemist—Temple University, class of 1938. Franklin studied pharmacy, as well.

Art Lonker is 42, studied chemical engineering at Drexel Institute. He served in the Army in World War II. He has been in the chemicals specialty business for 25 years.

He was thoroughly experienced in the production end of the business at Curley before switching to sales. Mr. Lonker was instrumental in developing the company's brokerage system in addition to performing other significant marketing functions. He approaches the study of marketing techniques in the private brand liquid detergent field with the dedication of a scholar as well as a sound business man.

Mr. Lonker has worked closely with Frank and Sam Levin in both production and sales. When founder's brother and his vice president decided to concentrate on sales, the company sought another experi-

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Cosmetic Chemists' Seminar Reviews

Skin Penetration of Surfactants

COSMETIC chemists met with dermatologists, endocrinologists, toxicologists, and biochemists to discuss numerous facets of percutaneous absorption at the sixth annual seminar of the Society of Cosmetic Chemists. Held at the French Institute in New York, Sept. 23 and 24, the seminar comprised seven presentations. L. J. Vinson, of the research division of Lever Brothers Co., New York, spoke on "Percutaneous Absorption and Surface Active Agents."

Five major questions must be answered by anyone investigating this subject, according to Dr. Vinson: 1. Is there any penetration of the skin? 2. If so, how far does it reach? 3. Is it confined to certain tissues? 4. What are the rates of penetration? 5. Are there any changes in skin receptivity?

Surface active agents particularly lauryl sulfate and dodecyl benzene sulfonate have been shown by several investigators to promote the entry of topical agents into normal skin, the principal route being the pilosebaceous apparatus. A second point of entry is the sweat gland. Little or no evidence exists regarding actual penetration of the epidermal barrier. Further attempts to answer these questions in more detail were based on earlier work (Nilzen in 1955). He first reported that multiple exposures to solutions containing four per cent nickel sulfate and one per cent sodium lauryl sulfate ("Teepol") caused skin irritation in guinea pigs. Either agent alone had no effect. These observations were used by Dr. Vinson and his group to study the influence of different surfactants on percutancous absorption. Nickel sulfate is a convenient tracer material for this study since its penetration into

skin is readily followed histochemically and also because the appearance of allergenic contact dermatitis is indicative of deep penetration of the nickel sulfate.

Dr. Vinson described in detail experiments on humans and guinea pigs with a number of different surface active agents alone and combined with nickel sulfate in various concentrations. The solutions were applied to the shaved guinea pig skin 10 times in succession, then, after an interruption of several days, another three times. A special staining technique was applied in examining the skin.

Anionic, nonionic, and cationic surfactants were included in the tests. Anionics tested were: soap, sodium lauryl sulfate, sodium dodecyl benzene sulfonate, sodium acyl isethionate and acyl methyl taurate ("Igepons" by Antara). Nonionics included polyoxyethylene ethers, namely "Sterox AJ 100" by Monsanto and "Brij 35" by Atlas Powder. One cationic was tested: "Arquad 2HT" by Armour which is distearyl dimethyl ammonium chloride. Only in the presence of one per cent sodium lauryl sulfate or sodium dodecyl benzene sulfonate was nickel sulfate (five per cent) found to penetrate the dermal layer with allergenic contact dermatitis ensuing. SDBS showed a slightly weaker effect than sodium lauryl sulfate. Soap and all other surfactants included in the tests yielded negative results.

The skins of animals pretreated with several applications of surfactant alone were found to be more sensitive than controls.

Speculating on the possible mechanism whereby nickel sulfate penetrates skin in the presence of some anionics Dr. Vinson mentioned keratin denaturization as one possibility.

In a previous session devoted to methods for measuring percutaneous absorption, B. Choman of Lever Brothers Co. presented data showing that tagged sodium lauryl sulfate is absorbed readily into the dermis of living skin. Dr. Choman's paper, entitled "Autoradiographic Studies on Percutaneous Absorption" reported on a technique for the study of percutaneous absorption of sodium lauryl sulfate, labelled with S²⁵, and nickel chloride, labelled with Ni⁶⁸, in laboratory animals.

While $G_{12}H_{22}S^{22}O_4$ is readily absorbed into the dermis of living skin, application of the tagged detergent to dead or excised skin results in very superficial absorption involving the stratum corneum only. Dr. Choman also dealt with absorption of Ni⁸²Cl₂ through rat skin as influenced by sodium lauryl sulfate.

"Percutaneous Toxicity of Cosmetic Materials" was discussed by Fred H. Snyder of the research division, Procter & Gamble Co., Cincinnati. Systemic poisoning resulting from the absorption of cos-

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Nonionic Water Soluble Resins

By M. T. Ivison and S. G. Sellers*

Union Carbide Chemicals Co.. Division of Union Carbide Corp., New York

HE advent of nonionic water-soluble resins gives the chemical specialties manufacturer increased latitude in formulating his products. Some of the chemical and physical properties of nonionic cellulose ethers and of a new series of water-soluble resins will be described. Utilization of some of these properties in certain applications will be outlined.

Through extensive research Union Carbide has developed a new series of water soluble resins. which it markets under the trade name "Polyox."** These high molecular weight polymers of ethylene oxide are tough, extensible, and thermoplastic. In appearance they resemble low density polyethylene resins.

Ethyl cellulose, ethyl hydroxyethyl cellulose, hydroxyethyl cellulose, methyl cellulose, and methyl hydroxypropyl cellulose are the nonionic ethers of cellulose which are currently available.

We will discuss primarily methyl cellulose and hydroxyethyl

cellulo nonion ethers these Chemie of cellu

and/or are atta to a cel ling th groups cellulos a wide range of properties. The reactions shown below are the basic steps required to make these prod-

Properties

Most ethers of cellulose depend primarily upon the fact that the substituted groups keep the cellulose chains apart and allow water to solvate the polymer. Cellulose is not water-soluble, because the hydrogen bonding between polymer chains prohibits solvation by the water. Like the nonionic surface-active agents the nonionic water-soluble resins exhibit gel points. A comparison of the gel points is given in Table I.

Table I

Product G	el Point
Methyl cellulose	50-60C
Methyl hydroxypropyl cellulose	60-90C
POLYOX water-soluble resins	100C
Hydroxyethyl cellulose abo	ve 100C

"Polyox" resins are thermoplastic and may be calendered, molded, or extended without addition of plasticizers or other additives. Cellulose derivatives resemble cellulose in that at elevated temperatures they begin to brown, and then to char.

Possibly the most important characteristic of methyl cellulose is its property of thermogelation; of hydroxyethyl cellulose, its ease of handling and tolerance for electrolytes; of "Polyox" water-soluble resins, their thermoplastic charac-

In contrast to ionic watersoluble resins, the nonionics offer greater latitude in formulating. In general, they have greater tolerance for the inorganic electrolytes which are incorporated, and for both cationics and anionics. Also the viscosity of solutions of these nonionic water-soluble resins is generally stable over a wider pH range than that of the ionic watersoluble resins.

All of these nonionic watersoluble resins are available in a wide range of viscosity grades. In general, the low-viscosity types are used where the binding of film-

H.O

NaCl

NaCl

salt

salt

se. The other	-
nic cellulose	ROH
are similar to	cellulose
two ethers. cally the ethers ulose are alkyl	RONa alkali cellu
hydroxyalkyl grou	ips, which
ached through an	
lulose backbone. B	sy control-
e number and th	
which are attach	ed to the
se backbone, one o	an obtain
C	The

		sodium hydroxide		alkali cellulose	
ulose	+	CH ₃ Cl methyl chloride	\rightarrow	R-OCH ₃ methyl cellulose	+
	+	CH ₃ -CH ₂ -Cl ethyl chloride	\rightarrow	R-OCH ₂ -CH ₃ ethyl cellulose	+
	+	CH ₂ OCH ₂ ethylene oxide	\rightarrow	R-O-CH ₂ -OH hydroxyethyl cellulose	
	+	CH ₂ -O-CH-CH ₃ propylene oxide	\rightarrow	R-O-CH-CH ₂ -OH CH ₃ hydroxypropyl cellulose	

RONa

[•]Paper presented during 45th midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 18, 1959.

^{**}Polyox," trade name of Union Carbide Corp., New York.

forming properties are most important; for example, as warp sizes for textile yarns, as sizings for paper, or in cosmetic face masks. The high-viscosity types are used where maximum thickening efficiency with a minimum amount of resin is desired; for example, in the thickening of latex paints, and in the bodying of shampoos and other cosmetic preparations.

Cosmetics and Detergents

The nonionic character of these resins is particularly advantageous in cosmetic and pharmaceutical formulations, where it permits, for instance, the use of cationic dyes in hair tints and dyes. Their high tolerance for electrolytes permits high concentrations of inorganic salts. The unusual heat and solubility characteristics of methyl cellulose make it an effective bulk laxative. The suspending properties of these compounds are utilized in preparing emulsions and lotions. The polyethylene oxide resins are good binders and antisloughing agents for soap and detergent bars. Their creamy, luxurious feel is imparted to cosmetic products in which they are used.

Paints

The superior protective colloid action of hydroxyethyl cellulose is utilized in the emulsion copolymers with vinyl acetate. In addition, hydroxyethyl cellulose imparts an outstanding tolerance for electrolytes to these latices. For example, latices in which hydroxyethyl celluloses have been used as protective colloids are stable to saturated solutions of borates. The high-viscosity grades of

these nonionic resins have found wide acceptance as thickeners for vinyl, acrylic, and butadiene-styrene latex paints. The compatibility of "Polyox water-soluble resins with the new high gloss latices presages its use in these systems.

Agricultural Specialties

The adhesive, film-forming, and thickening properties of these nonionics are utilized by the formulator and ultimate user of insecticides and fungicides. They are used as stickers for agricultural dust, where they act as a binder and an adhesive for the dust. In agricultural sprays they act to promote adhesion of the chemicals to the plants.

Water-Soluble Film

Calendered and extruded water-soluble films of "Polyox" resins are being test-marketed by the Visking Company. The thermoplastic properties of the resins yield films of good heat scalability. When correctly formulated, methyl hydroxypropyl cellulose is thermoplastic and can also be extruded, molded, and cast. The films are very resistant to oils and greases yet are readily soluble in water. They are available for test marketing.

Summary

The nonionic water-soluble resins offer the manufacturer of chemical specialties the key to easier formulations. Their nonionic character permits the formulator greater latitude in tailoring his products. The foremost property of methyl cellulose is its thermogelation characteristic. The thermoplastic properties of "Polyox" wa-

ter-soluble resins are unusual. Today hydroxyethyl cellulose is being widely accepted because of its ease of handling and its outstanding tolerance for electrolytes.**

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Smith Chemical Catalog

E. W. Smith Chemical Co., 15020 East Proctor Ave., La Puente, Calif., recently issued a catalog sheet about its "Triumph," a detergent-sanitizer for machine dishwashing or for use as a steam cleaner. The company is a jobber and manufacturer of industrial chemicals. Catalog sheets also were issued on the firm's water control feeders for water control treatment, algaecide pellets, and a rust remover tradenamed "Rustmulso."

AIM Booklet Cites Two

William C. Procter, a founder of Procter & Gamble Co., Cincinnati, and Pierre S. duPont, who directed the growth of E. I. duPont de Nemours & Co., Wilmington, Del., are featured in a 34-page booklet recently published by the American Institute of Management, New York, titled "The Great Contributors." Seven business leaders are cited in the booklet with short biographies of each and descriptions of their careers. These men, the Institute states, "have brought to the American economy a new set of measurements for management achievement."

Described as high molecular weight polymers, new series of water soluble resins are tough, extensible, and thermoplastic. They resemble low density ployethylene, and give makers of specialties greater latitude in formulation.

Alkaline Cleaner

(From Page 47)

to five per cent solution of gluconic acid at room temperature or slightly above (95°F.) (10). These tanks were of stainless steel construction with aluminum or aluminum alloy fittings. Satisfactory removal of beerstone and oxide films was accomplished, while the aluminum surface was not significantly affected and appeared bright and shiny. The aluminum cleaning formulation given in Table VII (4) has

Table VII. (4)

Additive	Parts
Tripoli (abrasive)	20
Infusorial earth	20
Bentonite	20
Glucono-delta-lactone	15
Wetting agent	2

been used successfully. It contains glucono-delta-lactone, an inner ester of gluconic acid, which is the only solid acid form of gluconate currently available.

Cleaning Stainless Steel

In the dairy and brewing industries the precipitation of calcium and magnesium salts and proteinaceous material causes what is termed milkstone and beerstone, respectively, on stainless steel equipment. Formulations containing gluconic acid are very effective in removing these precipitates, and yet are noncorrosive to the stainless steel. A compound intended for the removal of beerstone, stains and other discolorations from stainless steel beer barrels appears in Table VIII. Table IX lists a typical

Table VIII.

Additive	Pounds		
Sodium hydroxide	20 — 25		
Sodium gluconate	10 - 20		
Sodium oleate	0.1 - 0.2		
Water	12 gallons		

Table IX. (2)

Additive	% by Weight		
Gluconic acid	50		
Wetting agent	10		
Water	40		

liquid milkstone remover (2), while the product shown in Table X

Table X.

Additive	%	by	Weight
Gluconic acid	45		
"Hyamine"* 2389	16		
Nonionic wetting agent	5		
Water	34		

*Rohm & Haas Company, Philadelphia, Pa. combines milkstone removal with an effective germicidal action for cleaning dairy equipment and utensils.

Summary

Most caustic cleaning formulations stand to benefit by the incorporation of gluconate. Ability to chelate with divalent and trivalent metal ions makes this versatile anion useful in a wide variety of applications. One specific area where gluconates show great promise is in alkaline cleaning of aluminum. It has been demonstrated (11) that gluconate will not only chelate aluminum in a caustic solution but can also modify any scale present, rendering it non-adherent and easily removable.

The gluconate ion is available in solid and liquid form making it adaptable for incorporation in either type of caustic cleaning product. The formulations listed have been successfully employed in the specific cleaning tasks indicated. However, the concentrations suggested are merely a guide, and individual experimentation is required to ensure correctly formulated products.**

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First Technical Session, MBAA 71st

Anniversary Convention.

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Glycerine Output Up

Glycerine production in June and during the first half of 1959 increased sharply over totals for the 1958 periods. Output in June last rose to 23,200,000 pounds registering a gain from the June, 1958, figure of 16,400,000 pounds. Similarly, glycerine production in the first six months of 1959 reached 125,800,000 pound, as against 101,500,000 pounds in first-half, 1958. The figures, reported on a 100 per cent basis, are compiled by the Bureau of the Census of the U. S. Department of Commerce.

Glycerine stocks at beginning of June, 1959, totalled 52,600,000 pounds, compared with 69,500,000 pounds in 1958. Imports for June, 1959, were up, totaling 800,000 pounds, compared with 700,000 pounds a year ago. First-half imports to July I were down from '58: 5,500,000 pounds, against 5,900,000 pounds. June '59 exports dropped sharply to /1,400,000 pounds, from 3,000,000 pounds in '58. Likewise, first-half glycerine exports were off, as compared with 1958: 9,800,000 pounds to 11,600,000

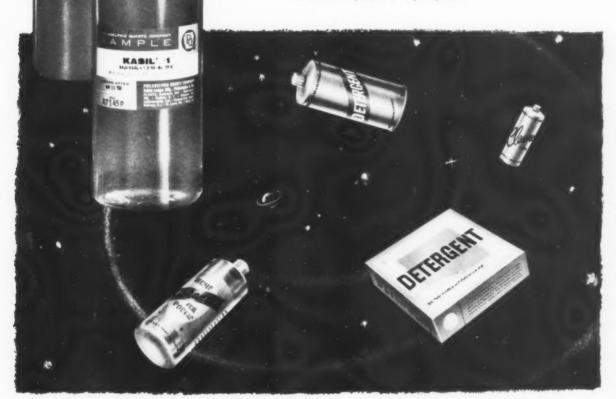
Stocks at the end of last June amounted to 53,100,000 pounds, down sharply from the '58 figure of 63,000,000 pounds.

Glycerine disappearance was up in '59 both on a monthly and half-yearly basis. This year disappearance of glycerine in June amounted to 22,100,000 pounds, as against 20,100,000 pounds a year ago. In 1959's first six months disappearance rose to 126,700,000 pounds, as compared with 113,500,-000 pounds in the comparable '58 period. June '59 production exceeded consumption by 1,100,000 pounds: last year disappearance exceeded output by 3,900,000 pounds. First-half 1959 excess of disappearance over production dropped to 9,000,000 pounds from 12,000,000 pounds in '58.

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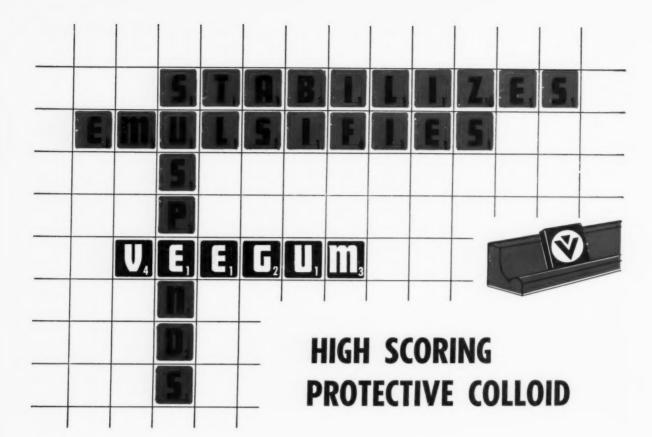
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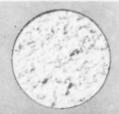
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J. L. "Jake" Brenn, president of Huntington Laboratories, Inc., Huntington, Ind., second largest U. S. marketer of maintenance and sanitation chemical specialties, looks back on forty years in this business. Here he reviews a bound volume of 1929 issues of Soap & Chemical Specialties in his firm's library. See article on page 78.



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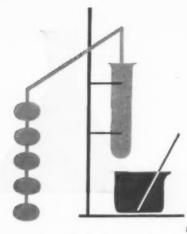
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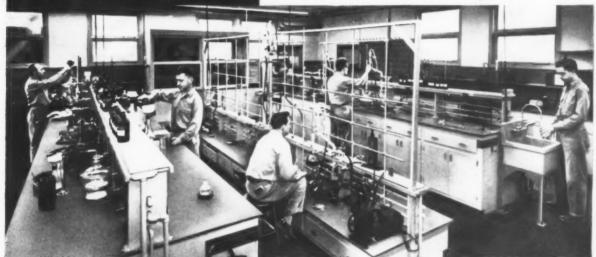
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Canadian Specialties Meeting

Canadian Manufacturers of Chemical Specialties Ass'n. to hold second annual meeting at Royal York Hotel, Toronto, Monday thru Wednesday, Nov. 2-4

EPRESENTATIVES of industry, government, and various institutions of learning will convene next month to exchange information and discuss many aspects of the chemical specialties field. The occasion is the second annual meeting and conference of the Canadian Manufacturers of Chemical Specialties Association to be held Nov. 2, 3 and 4 at the Royal York Hotel in Toronto, Canada, G. H. Wood of G. H. Wood & Co., Toronto, vicepresident of the association, is chairman of the program commit-

Panel sessions on pesticides and tariffs, and forums on floor products, aerosols, automotive chemicals, soaps and detergents, and disinfectants and sanitizers will be held on Nov. 3, and 4. The first day of the convention, Monday, Nov. 2, will be devoted to meetings of CMCS's board of directors. Division meetings to develop pro-

grams for next year's meeting will also be held on Nov. 2. Like the Chemical Specialties Manufacturers Association C.M.C.S. is composed of six divisions: Aerosol; Automotive; Disinfectants and Sanitizers; Insecticides; Soap, Detergents and Sanitary Chemical Products; and Waxes and Floor Finishes. A social feature is also scheduled for Monday, Nov. 2, when the association will have open house in its suite that evening.

In the morning of Tuesday, Nov. 3, the convention will formally open with the annual meeting and nomination and election of officers. G. E. Flemming, Guardian Chemical and Equipment Co., Montreal, president of the association, will deliver an address in which he will outline the group's plans for 1960.

Mr. Flemming's address will be followed by a panel session on tariffs with A. Robins of Cartier Chemical Co., Montreal, as moderator. Panelists will be G. H. Glass, vice-chairman of the Tariff Board, Ottawa; J. A. Davis, chairman of the Chemical Industry Tariff Committee; and A. Robins, chairman of th CMCS Tariff Committee. The panel session will be followed by a question and answer period.

Following luncheon on Tuesday, Nov. 3, the pesticides panel will meet under the chairmanship of A. H. Carter, Green Cross Products, Montreal. W. S. McLeod of the Canada Department of Agriculture will be moderator. Panelists and their subjects will include: A. W. A. Brown, head of the Department of Zoology, University of Western Ontario on "Resistance": E. Mastromatteo, Division of Industrial Hygiene, Ontario Department of Health, on "Health"; Lloyd Roadhouse, Scientific Information Section of the Research Branch, Canada Department of Agriculture on "Household Insecticides"; and a speaker yet to be an-

George E. Flemming, President



Geoffrey H. Wood, First vice-president



A. Robins, Moderator



OCTOBER, 1959

nounced on "Industrial Insecticides."

A forum on waxes and floor finishes will be held on Tuesday afternoon, Nov. 3, with the pesticide panel. R. S. Sweet of Success Wax Co., Montreal, will preside during the panel on floor finishes. Two presentations are scheduled. "Waxes for Paste, Part I, Physical Properties," will be reported on in a paper by A. R. Schuster, and T. V. O'Connor of Shanco Plastics & Chemicals, Inc., Tonawanda, N. Y. "New Silicone Furniture Polishes," will be the subject of a discussion by John Stapp, of Linde Co. Division of Union Carbide Corp. Later in the afternoon of Nov. 3 there will be a joint session of the aerosol and automotive divisions. Serving as chairman will be G. S. Lang, Connecticut Chemicals (Canada) Ltd., Toronto, and H. G. Lederer, R. M. Hollingshead Corp., Camden, N. J. Slated to speak in this session are: G. L. Piper, "Freon" Products Division, E. I. du Pont de Nemours & Co., Wilmington, Del., on "Automotive Aerosols" and John Odeneal of Fairfield Chemical Division, Food Machinery & Chemical Corp., New York, who will present an "Insect Resistance Survey.'

Two other joint divisional meetings will be held during the afternoon of Nov. 3. A forum on soaps, detergents, disinfectants and sanitizers will have R. L. Jones of Colgate-Palmolive, Ltd. and G. H. Wood as co-chairmen. Two papers will be presented: "The New Use-Dilution Plan for Germicides," by J. L. Brenn, president of Huntington Laboratories, Inc., Huntington, Ind., and "New Developments in Sanitizers and Disinfectants," by Arnold Lada, Onyx Oil & Chemical Co., Jersey City, N. J.

A "Company Open House" will conclude the program for Tuesday, Nov. 3.

A talk on sales presentations is scheduled for the morning of Wednesday, Nov. 4. The speaker is yet to be announced. In the afternoon R. L. Jones and G. H. Wood will again be co-chairmen of



Jean Gillet, Banquet Speaker

a forum on soaps, detergents, disinfectants and sanitizers. Only speaker in this session announced at the time of writing is David Fordyce, of the Bristol research laboratory of Rohm & Haas Co., Philadelphia. He will speak on nonionic detergents.

A concurrent forum on aerosols will be held under the chairmanship of G. S. Lang. "Perfumery Problems Associated with New Aerosol Products" will be presented by Victor DiGiacomo of Givaudan-Delawanna, Inc., New York, and "Commercial Development of an Aerosol Product" will be discussed by Winston H. Reed, Reed Research Corp., Shelton, Conn.

These two concurrent sessions will be followed by a forum on waxes and floor finishes and automotive products. H. G. Lederer will preside. Papers in this program include "Treatments for

Harold G. Lederer, Speaker



Concrete Floors' by H. V. Schmidt, Jr., Federal Varnish Division, Chicago; and "The Need for Cleaners and Waxes on the Automotive Finishes," by K. F. Parr and D. E. Whyte, of S. C. Johnson & Son, Inc., Racine, Wis.

The three-day meeting will conclude with a cocktail party and banquet at which Jean Gillet, director of the Montreal Citizen's Committee will speak.

A ladies program has been arranged which includes a tour of Toronto and surroundings. Members of CSMA will enjoy the same privileges as C.M.C.S. members. F. L. McCarthy, 7 Adelaide Street West, Toronto 1, should be contacted for further information and advance registration.

Screwworm Control in S.E.

Persons in the Southeast engaged in handling livestock are asked to report any appearance of screwworms in their animals or any suspicious cases to the nearest county agent or veterinarian. This appeal by USDA is part of a screwworm eradication program conducted jointly by USDA's Agricultural Research Service and Florida with the cooperation of other southeastern states. This program has been in progress for the past 13 months. It involves mass rearing and dispersal from airplanes of billions of screwworm flies, made sterile by exposure to gamma rays of cobalt 60. Eggs from native female flies that mate with the sterile males are infertile. Continued release of sterile flies over infested regions reduces the screwworm population until eradication results.

Wherever infestations are found in the campaign area the herds are placed under quarantine and treated with a pesticide to prevent spread of the pest. Two infested herds were found late last month, which prompted USDA's current appeal for watchfulness. Only one infested animal has been reported in Florida since late February compared with 30,000 to 40,000 cases monthly during the peak season prior to the campaign.

Program for the Second Annual Convention Canadian Mfg. Chemical Specialties Ass'n. Royal York Hotel, Toronto, Nov. 2-4

3.45 pm.

6 00 pm.

9.00 am. 10.30 am. 12.30 pm.

3 30 pm 3 45 pm.

5.00 pm.

6.00 pm

7.00 pm

,	Monday November 2nd
9.00 am	
10.00 am	
2.30 pm	
aloo piii	year.
	Aerosols and Pesticides
	Waxes and Floor Finishes
	Automotive
	Disinfectants and Sanitizers and Soaps and De-
	tergents
7.30 pm.	
	Tuesday Nevember 2nd
	Tuesday November 3rd
900 am,	Registration and information center
(100 am.	Annual Meeting
	Nomination and Election of Officers
	President will outline the Association's proposed
	role and program for 1960
1:00 am.	Panel on Tariffs—Chairman A. Robins, Carter Chem Co.
	Participants: C. H. Glass, Vice-Chairman,
	The Traffic Board, Ottawa
	J. A. Davis, Chairman
	Chemical Industry Tariff Committee
	A. Robins, Chairman
	CMCS Tariff Committee
	Question and answer period
2.30 pm.	Luncheon Guest speaker to be announced
2.15 pm.	Panel on Pesticides-Chairman A. H. Carter.
	The moderator W. S. McLeod, Canada Department
	of Agriculture
	The panel: Dr. A. W. A. Brown, Head of the De-
	partment of Zoology, University of
	Western Ontario
	Subject "Resistance"
	Dr. E. Mastromatteo, Division of Indus-
	trial Hygiene, Ontario Department of
	Health
	Subject: "Health"
	Lloyd Roadhouse, Scientific Informa-
	tion Section of the Research Branch
	Canada Department of Agriculture.
	Subject: "Household Insecticides"
	Also included in this panel will be a speaker on
	the subject of 'Industrial Insecticides"
2.15 pm.	Forum on Waxes and Floor Finishes-Chairmon
	R. S. Sweet, Success Wax Co.
	"Waxes for Paste, Part I, Physical Properties"
	Co-Authors: A. R. Schuster, C. T. O'Connor of
	Shanco Resins & Plastics, Tonawanda, N. Y.
	"Many Ciliagna Farmitura Daliahar"

"New Silicone Furniture Polishes" John Stapp, of Linde Air Products

Co-Chairment G. S. Lang and Dr. H. G. Lederer

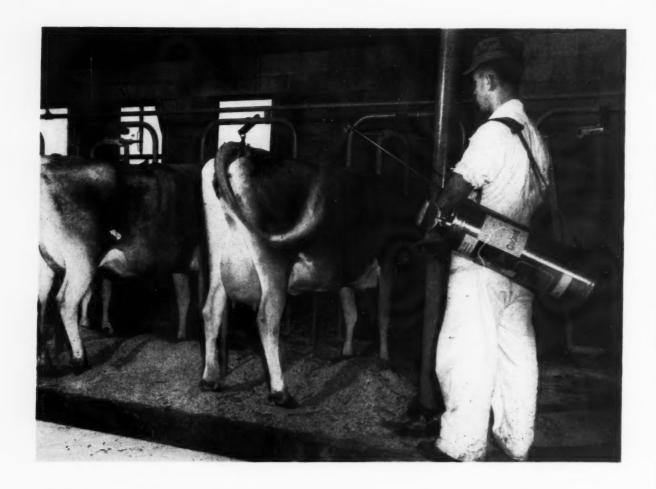
345 pm. Forum on Aerosols & Automotives

de Nemours, Wilmington, Del. "Insect Resistance Survey"—John Odeneal,
Technical Sales Section of Fairfield Chemicals.
New York Forum on Soaps & Detergents & Disinfectants &
Sanitizers
Co-Chairmen: R. L. Jones and G. H. Wood
Speakers: J. L. Brenn, president, Huntington Lab-
oratories Inc., Huntington, Ind.
"The New Use — Dilution Plan for Germicides"
Dr. Arnold Lada, Onyx Oil & Chem. Co., Jersey City, N. J.
"New Developments in Sanitizers and Disinfec-
tants."
Company open house
Wednesday November 4th
Information Center
Sales Presentation: speaker to be announced
Luncheon-Guest speaker to be announced
Forum on Soaps & Detergents & Disinfectants &
Sanitizers Co-Chairmen: R. L. Jones and G. H. Wood
"Nonionic Detergents"
David Fordyce, Rohm & Hoas Co., Philadelphia
Forum on Aerosols
Chairman: G. S. Lang
Perfumery Problems Associated with New Aero-
sol Products" — Victor DiGiacomo, Administrator of Perfume Laboratories, Givaudan-
Delawanna, Inc., New York City
"Commercial Development of an Aerosol Product"
Dr. Winston H. Reed, President,
Reed Research Corp., Shelton, Conn.
Adjournment
Forum on Waxes and Floor Finishes and Automotives.
Chairman Dr. H. G. Lederer
"Treatments for Concrete Floors"
H. V. Schmidt, Jr.
Federal Varnish, Chicago
"The Need for Cleaners and Waxes on the New
Automotive Finishes" Co-Authors: K. F. Parr and D. E. Whyte,
S. C. Johnson & Son, Inc., Racine, Wis.
Adjournment
Cocktail Party
Banquet
Guest speaker: Jean Gillet, Director,
Montreal Citizens' Committee
Floor Show

"Automotive Aerosols"-G. L. Piper,

Technical Assistant to the manager of aerosol propellants of Freon Products, Division of E. I. du Pont

3.30 pm. Adjournment



The Fly Problem in New York

QINCE biblical days when 'grievous swarms of flies" invaded Egypt, Adam's descendants have been trying to repel, kill or otherwise outwit the lowly but dangerous housefly. Before the advent of DDT a lengthy miscellany of partially effective materials were recommended, and sanitation was preached from the housetops of all state and federal experiment stations. With the coming of DDT many began talking of housefly eradication, and sanitation was neglected in many quarters. DDT resistance in houseflies saddened the exponents of eradication and made it clear that research on housefly control must be

By H. H. Schwardt*,

Department of Entomology Cornell University

a continuing effort, and that no chemical control measure would be permanently effective. The organic phosphate materials took the stage and for three brief years gave new hope to the tired cow barn entomologists. The organic phosphate materials still were definitely in the picture for 1959, although resistance had been reported in several states, and the possibility of cross-resistance to new organic phosphate insecticides casts a shadow on the future of housefly control with these materials.

In New York it appeared that our only alternative for 1959 was to throw the entire book at the flies, and this we did in our annual recommendation sheet sent to county agricultural agents.

As usual we began with stern admonitions about keeping the barn and its environs clean and free of fly-breeding media. This always sounds like vain repetition but after twenty years of it we still get our annual shock, or several of them when we see systems of barn management that appear to be planned for fly production as a primary enterprise. And surprisingly some of these are the cow palaces with varnished interiors, and stanchions holding registered cattle of high value. The main

^{*}Paper presented during 45th midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 19, 1959.

trouble in most of these occurs in the calf pens. Dairy calves in the Northeast are kept in the barn most of the summer, in pens located outside the stanchion section of the barn. The pressure of work with the milking herd is heavy and frequently the calf pens are neglected. Manure deepens in them, sometimes to the extent that the inmates can jump the enclosure at will. Flies breed by the thousands in these' pens and migrate to the stanchion section of the barn. No amount of any residual spray can hold flies down under these conditions, nor will gallons of space spray and pounds of aerosol do the trick.

In the undeserved interest of those who refuse to clean their calf pens at least once a week, we have been experimenting with manure treatment and the results are encouraging. We have found that .125 "Diazinon" (1) (two quarts of 25 percent emulsifiable in 100 gallons) sprinkled in calf pens at the rate of one gallon on each 100 square feet of surface will kill fly larvae and also adults that wander about on the surface. Cholinesterase tests on calves, kept continuously in such treated pens, indicate that no dangerous reduction occurs. But keep the poultry out of pens treated with "Diazinon". Young ducks are particularly susceptible to "Diazinon" poisoning.

For a residual spray program in the dairy barn we in New York recommended a "Diazinon" spray at the one percent level for the first go around in 1959. It may have lasted all summer, or only for a few weeks. Where application proved disappointing, "Korlan" (2) was recommended for the second treatment. "Korlan" gave excellent control in 1958 but due to the probability of cross resistance it was not expected to give spectacular results against "Diazinon" resistant flies. If severe resistance to "Diazinon" developed in New York

in the 1959 season we also included "dicapthon" (3) in our list of suggested materials even though it does stain some types of surface, and malathion in spite of its relatively short residual life on the barn wall.

Fly Bait

We recommended also that every dairyman have a supply of fly bait and either a space spray or an aerosol available for emergencies. When fly breeding is held to a minimum by proper barn and farm sanitation, excellent fly control can be obtained by intelligent use of space sprays or aerosols. This meant daily use for a week or 10 days, and spraying or aerosoling at two- or three-day intervals thereafter. It meant careful calculation of the barn's cubage so that sufficient dosages were applied. It meant having barn doors and windows closed during and for a half hour after each application. It also involved treatment of all animal quarters on the farm in the same manner, not just the dairy barn. Specialized equipment was available for rapid or even automatic dispersal of space sprays.

Fly baits based on granulated sugar or other substrate with malathion, "Diazinon", or "Dipterex" (4) added as a toxicant have killed flies effectively in many New York barns. In the event of largescale resistance to the residual sprays these baits may again become popular with dairymen. Even though the same toxicants are used in the baits and residual sprays, the baits probably are somewhat more potent because the flies not only walk over them but also feed on them and thereby get a heavier dose of poison. We have said before and will repeat our opinion that a given material will kill more flies when used as a residual wall and ceiling spray than if used as a bait. This opinion is based on the greater area of insecticide presented to the flies when a residual is applied. But a fly crawling on a wall probably will get a smaller

and less rapidly acting dose than it will by both crawling on a bait and ingesting its attractive coating containing a toxicant. Baits have the disadvantage that they must be applied mostly on the floor, and barn floors are or should be swept daily. Under these conditions baits must be applied daily. In many barns superphosphate is applied to the floors daily, and baits applied over superphosphate are somewhat less accessible to the flies.

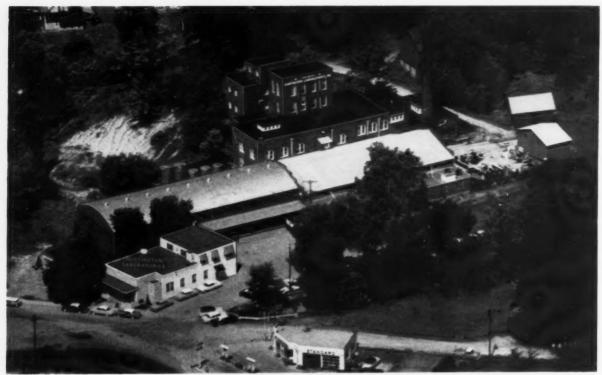
Several hundred miles of cotton cord treated with insecticides has been sold for fly control purposes during the last few years and most of it has performed well. Parathion and "Diazinon" usually are the toxicants used. Our tests in New York show that treated cords are attractive to flies and kill all that come to roost on them. A more than fair degree of control was obtained in barns where breeding areas were kept to a minimum. In spite of the usually fugitive nature of parathion it persists in these cords for weeks or months. Since they are impregnated with a high concentration of parathion the cords can be dangerous if not handled according to label directions. They must be hung and stored well out of the reach of children. The manufacturer reports that these treated cords are one of the few things that a dairy cow will not eat.

Flies that bite, and suck blood from dairy cattle apparently are not a serious problem in New York. We haven't received more than half a dozen requests for control information in the past 20 vears. During several seasons we have searched the state for herds sufficiently infested for test work with some of the new repellents but have found none.

Cattle grubs, both Hypoderma bovis, and H. lineatum are common in the state and probably cause more damage than dairymen realize. Each year in late spring and early summer herds are seen

(Turn to Page 105)

³⁾ Registered trade name of American Cyanamid Co., New York, N. Y. 4) Registered trade name of Chemagro Corp., New York, N. Y.



Aerial photograph of newly remodeled general office, left foreground, and plant of Huntington Laboratories, Huntington,

Ind., showing recently completed additions. For contrast see 1938 photograph of plant on page 80.

Huntington Laboratories — 40

other odd brewery equipment, four employees and practically no business was the story of Huntington Laboratories' second year of operation. The year was 1920, and these were the tools J. L. "Jake" Brenn had to work with while revamping the company.

Just a year before, a group of Huntington, Indiana, men had purchased an abandoned brewery where they were producing caffeine and tannin under a patented solvent-extraction method. Incorporation papers had been issued, and the new firm was known as the Huntington Chemical Company.*

Then the company received a severe blow. Aspirin was developed, and caffeine began to lose its importance in the medical field as a pain reliever. The Huntington Chemical Company appeared to be headed for financial disaster, and the management looked outside its ranks for help. They found Jake Brenn.

Jake Brenn started his career in 1915, as a clerk at West Disinfecting Company. He had just graduated from Valparaiso University, with a B.S. degree in chemistry. Three years later, in 1918, Jake left West and joined the U. S. Sanitary Specialties Company in Chicago, as their production manager and secretary of the corporation. Then the call came

Close-up of new entrance to remodeled and enlarged general offices.



*Huntington Chemical Co. became Huntington Laboratories, Inc., in 1921.

from Huntington Laboratories.

When Jake arrived on the scene, August 16, 1920, the Huntington Chemical Company was virtually "on the rocks." One of his first moves, as head of the Indiana company, was to change to the production of sanitary chemicals. He also adopted a revolutionary one price policy.

"This industry, like a lot of others, employed the so-called drummer' type of salesman, and uniform selling prices were unknown," explained Jake. "Premiums and shady deals and graft were the common means of securing business. Those were the days when a salesman didn't need to know much about his products as long as he had a trunk full of premiums and a large bank roll in his pocket."

The first products manufactured by Huntington were "Bug," an insecticide; "Black," a

Years Later

disinfectant; and "Scrub," a floor scrubbing soap. The one price policy, and other policies introduced by Jake Brenn, soon began to pay dividends; and Huntington



J. L. ("Jake") Brenn, president and "saviour" of Huntington Laboratories. He put the converted brewery on a paying basis and revolutionized sanitary supply selling by adopting the unheard of "one price policy."

Laboratories became a going concern.

However, Jake's business success was not based exclusively on his ability to solve marketing problems. In 1922, he hired two men who are still with the company today. One is Thomas Patrick Annan; the other is Hurley Feltman. Both are presently key executives with Huntington Laboratories, and Jake Brenn remarked recently, "Without them, I don't know where we would be today."

Tom Annan joined the company as production manager and has continued in that capacity to the present time. In addition, he is secretary-treasurer of the corporation. Tom has a B.S. in chemical engineering from Ohio State University and an M.S. from the Catholic University of America. Vice-president Hurley Feltman was hired as a salesman, and he has been a central figure in the sales department for the past 37 years.

Huntington Laboratories is now celebrating its fortieth anniversary. The firm is today one of the largest manufacturers of chemical maintenance and sanitation supplies in the United States, providing products to protect expensive investments in school buildings, to help fight infections and maintain cleanliness in hospitals and to do a variety of specialized maintenance, sanitation and production jobs in industry.

Highly trained personnel develops the specialized products that are marketed in each of the 50 states and across the seas. The firm also has a branch office and plant in Philadelphia, an affiliate in Toronto, Canada; and exports to South America and other parts of the world.

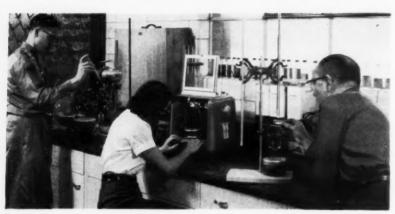
More than half of Huntington's sales are to schools and colleges. The early development of the first gym floor sealer, called "Seal-O-San," opened the door to

Earl Brenn, executive vice-president of Huntington, in his new office. He is also president of Huntington's subsidiary in Philadelphia, Crystal Soap & Chemical Co.





Huntington plant and offices (left foreground) as they appeared in 1938.



Laboratory facilities at Huntington have been expanded to keep pace with changes in technology in fast-moving chemical specialties field.

A view of the reception desk and bookkeeping department in general offices.



this field for Huntington Laboratories. The firm estimates that approximately one-third to one-half of all the gyms in the United States have floors protected with its products.

Huntington entered the hospital field in 1925, with a patented portable foot pedal soap dispenser. Since then, the company has developed a large volume of hospital business second only to the educational field.

There are Huntington germicides for every need in modern hospitals . . . from the operating room, to the nursing station, to the kitchens, to the laundry. The firm supplies antiseptic soaps and detergents which are used by surgeons and the operating team, prior to operations, for scrubbing and degerming hands and arms.

Specialties for Industry

Huntington also develops chemical specialties for individual needs in industry. For example, a large distillery contacted the firm a few years ago and told them about a long standing maintenance problem. The spouts on the large vats containing whiskey dripped, and the alcohol ate away the floor tiles. Since there was no way to prevent some dripping the maintenance men from the distillery asked Huntington to develop a wax that could shrug off the effects of the dripping alcohol. Jake laughingly reported that, after Huntington's laboratory staff created such a wax, a wag dreamed up the advertising headline, "At last! A wax that can hold its liquor."

This wax was found to be resistant not only to alcohol but also to water. Used on floors where there is excess wet-traffic, as in the entrance halls of schools or commercial buildings, it was one of the pioneer water-resistant waxes now in common use throughout industry and in the home.

Jake has many other stories at his finger tips about how Hunt-(Turn to Page 99)











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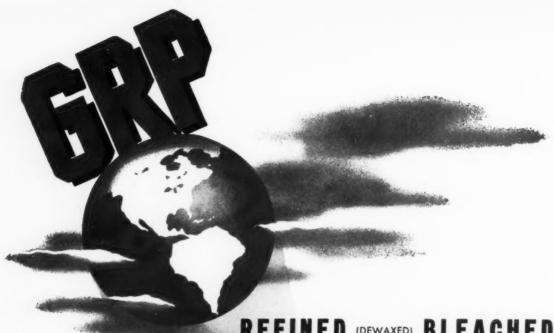
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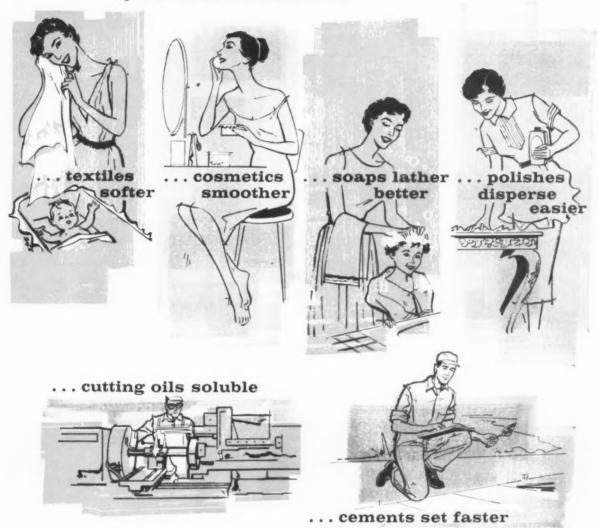
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Floor Polish Latices

Effect of pH on light scattering behavior of two types of floor polish latices. Data correlates this with effect of pH on film properties of latices, polishes using them.

By H. L. Pfluger and C. V. Pratt*, Borden Chemical Co., Philadelphia

N this paper we will present data showing how pH affects the light scattering behavior of two types of floor polish latices, and correlate this with the way pH affects the film properties of the latices and polishes made from them.

Both of the latices compared here contain carboxy groups which fulfill several desired functions such as conferring alkali removability and contributing to the freeze-thaw resistance of the latices. However, they differ essentially in the location of their carboxy groups. One of them, a styrene-acrylic, has the carboxy moieties as a part of a supporting colloid. The other, a hard acrylic, is polymerized without supporting colloid but contains the desired level of carboxy groups in the reacting monomers themselves. The particular examples of these two types of latices used for this were chosen on the basis of careful research to obtain the optimum advantages of each type in floor polish formulation.

Light is scattered by molecules because the incoming electromagnetic wave polarizes the molecule, setting up dipoles which vibrate and thus initiate new electromagnetic waves in other directions from the incident beam. In the case of aggregates of large polymer

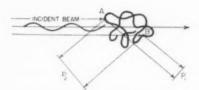


Figure 1. Interference of light scattered by different parts of a polymer chain comparable in dimension with the wavelength.

molecules, such as form the particles of latices, this phenomenon takes place at many different places within the same particle, and interference can occur between different scattered waves. (1) The scattered light observed will therefore be less than might be expected if this interference did not occur. (Fig. 1)

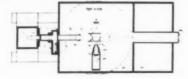
The molecules within particles are always undergoing a certain amount of random movement. But as long as the average structure of the particles remains the same, the light scattering too will be unchanged. The light scattering would change, however, with any changes in particle structure that would affect the degree of polariz-

ability or the degree of interference. A priori, we might expect that increasing pH would be more likely to bring about such a change in a particle incorporating carboxy groups within its own copolymers than in particles which did not contain carboxy (even though they were colloidally stabilized by a water-soluble material containing carboxy). As the medium becomes more alkaline, increasing numbers of the carboxy groups are ionized to carboxylate anions which are more hydrophilic. If the carboxy groups are within the polymer, they would be expected to cause more water to enter the particle, causing it to swell. Furthermore, ends of molecules containing carboxy groups would be expected to extend further into the surrounding water. Such changes would also change light scattering properties and might be expected to increase the points of contact between particles when forming a film.

So much for rationale. Before discussing results we shall briefly describe the procedure used for measuring light scattering. The apparatus used was the Brice-Phoenix; its optical system is shown in Figure 2.

The light from a mercury lamp passes through a monochromatic filter. (In this work blue light of 0.436 microns was used.) The intensity of this light can be

Figure 2. Optical system for Brice-Phoenix apparatus.



^{*}Paper presented at the 45th midyear meeting of the Chemical Specialties Manufacturers Association, Chicago, May 19, 1959.

⁽¹¹ Flory, Paul J., "Principles of Polymer Chemistry", Corne'l University Press, Ithaca, N. Y., 1953, p. 293; Figure 1 is taken from this book,

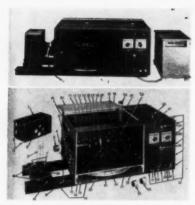


Figure 3. Brice-Phoenix apparatus for measuring light scattering. Galvanometer which records photoelectric pickup is shown at right in upper photo.

cut by the use of several calibrated filters. A photoelectric cell on a rotating platform can pick up light at any desired angle. When the strong incident beam is viewed, a permanent calibrated filter automatically slips into the path of light. The scattering measurements of this paper were all made at a 90-degree angle.

A photograph of the apparatus, including the galvanometer which records the photoelectric pickup is seen in Figure 3.

Scattering is measured by a quantity known as turbidity. As shown in formula below this is a function of several calibration factors, factors corresponding to the filters used, and in particular the galvanometer deflections at 0 and 90 degrees, respectively.

$$T = \frac{Kn^2}{h} \frac{R_w}{R_c} \text{ af } \frac{G_{00}}{G_0} = \frac{Constant}{h} \text{ F } \frac{G_{00}}{G_0}$$
$$= \text{ for example 7.55 } \frac{F}{G_0} \text{ cm}^{-1}$$

K = cell calibration factor

 $\frac{R_w}{R_e}$ = refraction calibration factor

a = constant factor for filter at 0° n = refractive index of solvent

n = retractive index of solv $F = factor for filters at 90^{\circ}$

 $G_{90}=$ galvanometer reading at 90° $G_{0}=$ " " 0°

h = diaphragm width

Turbidity, defined this way, increases with concentration. (See curve shown in Figure 4.) This increase is the result of the particles' interacting with each other more and more as they get closer

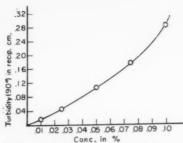


Figure 4. Variation of turbidity with concentration using "Polyco X-172" at pH 7.3.

together. Light initially scattered from one particle is again scattered from another, and so on. If, therefore, we want to get a measure of the behavior of single particles, we must plot some function of the turbidity which is finite at infinite dilution. Such a function is the specific turbidity, the turbidity per concentration, T/C. Actually, we plot the inverse of this, C/T, because this gives straight lines and permits an easier, more accurate, extrapolation.

The straight lines obtained for the latex containing no carboxy groups in the polymer itself appear in Fig. 5; for the latex with carboxy groups in Fig. 6.

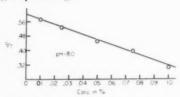


Figure 5. Change of C/T with concentration using styrene acrylic latex "Polyco X-172."

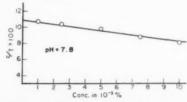


Figure 6. Change of C/T with concentration using styrene acrylic latex "Polyco X-134."

Since the particles begin to influence each other at relatively low concentrations these measurements are made at dilutions much lower than those at which the polymers are used in floor polishes, namely in the range .1 down to .001%.

The stability of such low

dilutions might be questioned. The data in Table I assures us that they are indeed stable, because the readings agree quite well over a period of two days after dilution.

Table I. Measurements of C/T after various periods of standing (POLYCO X-134)

Conc. in					
1/1000%	1.00	2.50	5.00	7.50	10.00
15 min.	10.8	10.4	9.78	8.83	8.06
1 day	10.6	10.6	9.90	9.07	8.13
2 days	10.5	11.1	9.26	8.85	8.26

We are thus using the extrapolated value of the (C/T) at zero concentration as a measure of the scattering properties of the single particles. Let us now see how these values differ when the pH is varied.

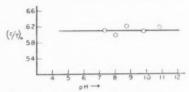
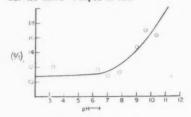


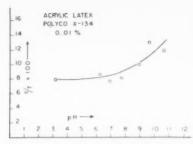
Figure 7. Styrene-acrylic latex "Polyco X-172."

In Figure 7 we have the (C/T) a values for the styrene acrylic, having no carboxy groups in the polymer. They are unchanged by pH variations over the range 7 to 11. This result would imply that there is no essential change over this pH range in the arrangement of the polymer molecules within the latex particle. We should therefore expect that the film-forming properties also would be essentially unchanged. In the second part of this paper it will be shown that practical tests confirm this assumption.

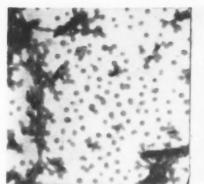
Fig. 8 shows the $(C/T)_{\circ}$ value for the acrylic latex containing carboxy groups in its polymer structure. Here we observe that $(C/T)_{\circ}$ remains reasonably con-

Figure 8. Effect of pH on (C/T), using acrilic latex "Polyco X-121."





stant up to a pH around 8 or 8.5. then increases with rising pH. In Figure 9 this shift in C/T with pH can be observed at the finite concentration of .01 per cent as well as at infinite dilution. We conclude that the pH does indeed affeet the polymer and particle behavior in the manner conjectured at the beginning of this paper. As the medium in which they are suspended becomes more alkaline, the particles become more hydrophilic, take up more water, much as though they were little sponges. Molecules at the periphery of the particles can be visualized as extending out more into the surrounding water. We may therefore suspect that as a suspension of such particles is dried into a film, the molecules from one particle can become easily entangled with the molecules from an adjacent one, even while they are still well surrounded by the evaporating water. This resultant homogeneity might be expected to contribute to excellent gloss and clarity of film. Again, in the second part of this paper we shall find that practical



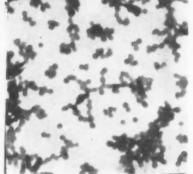
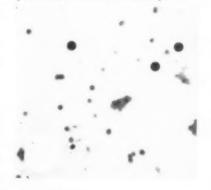


Figure 11. Electron micrograph of latex shown in Figure 10 and dried from concentrated ammonia solution.

tests do indeed verify this interpretation.

Further evidence that carboxylated polymer particles tend to coalesce in sufficiently alkaline solution is afforded by the accompanying electron photomicrographs of the carboxylated acrylic. Figure 10 shows a photograph of particles deposited from plain water dilution at around pH 7. The particles have a fuzzy periphery because their internally plasticized mole-

Figure 10. Photomicrograph of carboxylated acrylic: Particles deposited from plain water dilution at about pH 7.



cules lack rigidity. Their loose structure also permits electrons to penetrate them so that the contrast in the photograph is low.

Incidentally, this photograph also shows the rather good uniformity in size, very close to .05 microns. as can be noted by comparison with the standard Dow polystyrene particles, which are 0.18 microns in size. This fine particle size contributes to the good gloss characteristics of these films.

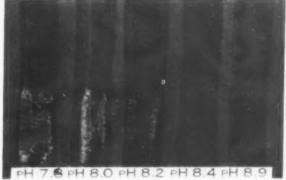
Now, for comparison, Figure II shows an electron micrograph of the same latex dried from concentrated ammonia solutions. The ammonia and water had both been driven off before this picture was taken, but the evidence remains that at one stage the particles were swollen with the alkaline water and dried back to a much more compact structure, bound together by the hydrogen bonds between carboxy groups. The particles are now denser to the electron beam and the contrast is better. But, in particular, where the particles have

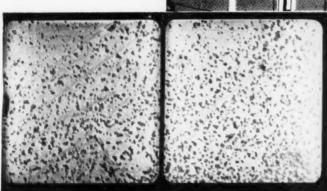
Figure 12. Acrylic latex films-"Polyco X-134."



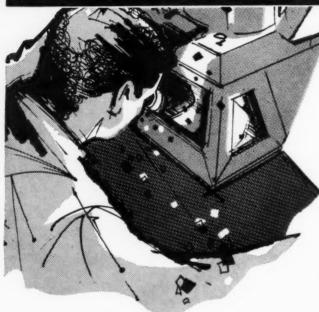
PH 2.4 PH 4.5 PH 7.8 PH 8.8 PH 9.4







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PH 7.2 PH 7.8 PH 8.6 PH 9.4



Figure 15. Styrene acrylic polish films-"Polyco X-172."

Figure 14. Styrene acrylic latex films—"Polyco X-172."

come into contact with each other, they have joined in a way that is evidence of their previous state of molecular entanglement at the points of contact.

Acrylics Tested

The two latices described in the light scattering study represent two classes of latices suitable for formulation into heavy duty floor polish. Several samples of the acrylic latex were prepared at 15 per cent solids, adjusted to pH's varying from 2.9-9.4 with ammonia. The latices were applied to a paper test sheet without further modification at a spreading rate of 1000 sq ft/gallon and dried under controlled conditions of 50 per cent R.H. at 77°F. The result is illustrated in Figure 12.

It will be noted that these latices show a marked tendency to form a continuous film at pH 8.5 and above. This point of film formation corresponds roughly to the pH point where specific turbidity showed a rapid change in the light scattering experiment, a change which we explained as due to a change of the particle structure which makes it easier for molecules of neighboring particles to become entangled.

This same series of latices was compounded into polish as follows: latex solids 67 per cent, polyethylene wax dispersion solids 10 per cent, and alkali soluble resin solids 23 per cent. These polishes were applied to black rubber tile under controlled drying conditions as stated above for 16 hours. The wet

altrasion characteristics were checked on the Gardner straight line washability apparatus (GSA Spec.) The results are shown in Table II.

pH Latex 2.9 4.4 7.75	Table II.	pH Polish 7.8 8.0 8.2
8 60		8.4
9.40		8.9

All these polishes had good initial appearance, having formed continuous films without using any additional solvents or plasticizers. However, the wet abrasion resistance shows a marked improvement when the pH is changed from 8.2 to 8.4. This corresponds fairly closely to the same pH turning point at which film continuity of straight latex is attained, and at which the shift in light scattering behavior occurs.

The film formed by a polish using this type of material exhibits resistance to water spotting and wet abrasion. Upon the application of an alkaline detergent solution to effect removal of the old polish film for floor maintenance. the carboxy groups are reactivated with easier and more complete removal of the material. As the carboxy group is an integral part of the polymer chain, it is not so susceptible to leaching by damp mopping so that deterioration of alkali removability will be minimized. In addition, the presence of carboxy groups in the polymer chain of the polish film makes for better leveling and normal lay down of subsequent coats on the old polish film, while also promoting good adhesion between coats.

Turning now from the carboxylated acrylic to the non-carboxylated styrene acrylic, similar experiments with latex films and corresponding polishes were made. The range of pH possible with this second latex is limited in that coagulation occurs below pH 7 because of the solubility characteristics of the supporting colloids at lower pH's. Several samples of the styrene-acrylic latex were prepared at 15 per cent solids and adjusted to pH's 7.1-9.4 with ammonia. These latices were applied to paper test sheets and dried in the same way as were the acrylic latex series. (Fig. 13)

This latex showed borderline film formation at the pH 7.1 level, but was satisfactory at higher pH's. The poor performance at the lower pH is attributable to the borderline solubility of the protective colloid at this pH. Over the range 7.8 to 9.4 performance is relatively constant. Again, polishes were prepared from these latices, using the same proportions of latex solids, polyethylene wax, and alkali soluble resin as was used with the acrylic latex. Application of these polishes to rubber tile is illustrated in Figure 14.

The pH values of latex and corresponding polish are as follows:

pH Latex	pH Polish
7.1	7.75
7.8	8.00
8.6	8.50
9.4	9.30
(Turn t	o Page 109)

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technical advice on AEROSOLS

ROM novelty to luxury to necessity describes the progress of acrosol products in the household field. Acrosols have continued to rise in sales, racking up new records even during a recession period which had adversely affected some household products.

The strong position of aerosols in the household market reflects a growing consumer demand for convenience. It also confirms consumers' willingness to pay a premium for convenience. Almost any household product packaged in aerosol form costs more than similar conventional products and rests on its ability to do an equally good job faster and easier.

What type of guidance the independent consulting organization can offer fillers By Walter Edman,

Evans Research and Development Corp.

The range of household acrosols now stretches from insecticides — the first consumer products in acrosol form — to lighters for charcoal grills. A supermarket of acrosols was one of the highlights of the December 1958 meeting of the Chemical Specialties Manufacturers Association. Approximately 60 per cent of its shell space was devoted to household items in a display which would have filled several aisles of an average supermarket with air refreshers, waxes,

dust repellents, rug and upholstery cleaners, paints, protective coatings, garden sprays, and similar items. Aside from the scope of the display, the most significant part of it was that lew of these were "new" products that had originated with acrosol technology. Almost all were derived from familiar chemical specialties but few of these specialties had enjoyed wide consumer acceptance until packaged in acrosol form for convenience and ease of use.

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The author of the accompanying article, Dr. Walter Edman, is associate director of research for Evans Research and Development Corp.

Almost any specialty used to clean up, polish up, and keep up the home, garden, home workshop, or garage seems to consumers to be improved by aerosol packaging. According to the pilot consumer panel at Evans Research and Development Corp., acrosol is the most satisfactory form for such products as air refresher, insecticide, oven cleaner, and dust repellent. There is also a preference for aerosol packages in various spotcleaning products and waxes, metal polishes, paints, and glass cleaners. These aerosols, in the opinion of the panel, deliver superior results and are worth a somewhat higher price. However, price becomes a consideration when the aerosol form does not do the job more satisfactorily than the standard form of the same product. In the examples cited by the panel, specific brands are mentioned more often than general product categories.

In suggesting new ideas for aerosols the homemakers on our panel are enthusiastic and imaginative, but a check shows that their suggestions are generally small variations of aerosol items already on the market. Their enthusiasm indicates that consumers are still very receptive to the idea of house-

hold aerosols and the field is still open for competition. Some of the products desired by the panel are sold now for industrial use and apparently have potential for household applications. Many more are products that have been manufactured but have not been market successes because they have not performed adequately in the home.

Consumers' interest in aerosols has not been dimmed by experience with inadequate products but studies indicate unwillingness to try a brand, or occasionally a type, that has been found disappointing once. In practice, the manufacturer who introduces a new aerosol risks not only the investment in the new item but the reputation of his entire aerosol line, established and projected. As aerosols have lost the appeal of novelty, quality has become progressively more important, and as more brands enter the field, marginal differences of performance and price are going to become critical. In the near future the chances for market success are going to be limited by stiff competition from other aerosol brands and all new products are going to need a solid foundation of skillful formulation, production, and package design.

In the aerosol field technical guidance is readily available to serve manufacturers. Highly specialized aerosol technology has developed a new corps of experts to keep pace with it. Working exclusively on specific aspects of aerosol technology are the specialized laboratories of propellant and packaging suppliers, independent laboratories devoted to product development, and contract manufacturers. With these services to call upon, a company can enter the aerosol field with a minimum investment. Heavy outlays for staff and equipment are not necessary and company executives are free to concentrate on the marketing and merchandising aspects. This reservoir of technology has been credited by one of the industry's leaders as a key factor in the rapid growth of aerosol sales.

The successful marketing of aerosols depends upon the same factors as the successful marketing of other household products knowledge of the market, satisfactory distribution, and creative merchandising. This kind of knowhow exists within every established company, ready to draw upon as soon as there is a sound product to sell. But the particular skills of physics, chemistry, and engineering which make up a sound aerosol product are seldom available-even in giant corporations. Although assembling such a technical staff is expensive and time consuming, acquisition of technical competence from other organizations enables management to turn a product idea into a marketing reality. Marketing management should coordinate the execution of the idea and delegate responsibilities to the properly qualified person or group.

The initial responsibility — the decision to develop a new product — rests, of course, with management. In any new product discussion today, aerosol packaging receives prime consideration, partly because of the proven sales appeal of aerosols and partly because of the availability of specialized formulation and production facilities.



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The next step is to determine the feasibility of putting the product into aerosol form. Almost any foam, liquid, powder, or emulsion can be adapted to aerosol packaging, but there are some exceptions. Some formulations interact with packaging materials and present problems of corrosion. Some formulations are diluted by the propellant and lose their effectiveness as cleaning or polishing agents. Other problems arise in the handling of emulsions and volatile ingredients. These eventualities can be checked by conferring with the technical service representative of one of the major propellant manufacturers. Their laboratories are usually able to supply pertinent data. The laboratories of custom fillers also are able to draw upon a background of aerosol experience.

Sometimes a more thorough appraisal can be obtained from an independent laboratory with experience in product development. Such laboratories are usually equipped to conduct a general evaluation of the product idea and to estimate time and cost involved in developing a formulation. A general evaluation is particularly desirable when the new aerosol is to bear the characteristics and brand name of one of the company's established products. The laboratory staff can assess the practicability of duplicating the brand's salient features in the new aerosol and can point out modifications which may enhance the aerosol's appeal.

After the feasibility of the aerosol idea has been determined the next step for management is to authorize the development of a formulation. Management will outline in general terms the specifications for a marketable aerosol and will then delegate the responsibility for meeting these specifications to a technically trained staff. Experts within the company will pool their knowledge of the firm's regular line of waxes, polishes, cleansers, or other specialties with the know-how of aerosol technologists.

At a qualified independent laboratory, an integrated staff sup-

ports the aerosol chemist. Physicists, corrosion engineers, perfumers, odor evaluation panelists, home economists, and chromatographers regularly contribute to the formulation of an aerosol. For some products, emulsion technologists. bacteriologists, botanists, entomologists, and metallurgists play a key role. All of these experts are likely to be found working as a team at an independent laboratory. This concentration of trained personnel is particularly helpful to the small company and to the company which does not wish to coordinate data from several laboratories, each studying one facet of the problem.

"Team Approach"

One of the benefits of a team approach is likely to be a trouble-free product. As most manufacturers know, the rate of rejects on acrosols is unusually high, and so is the volume of complaint mail from consumers. Obviously, a successful aerosol is more than a combination of a tried-and-true chemical specialty and a propellant in a pushbutton can. For example, lowering the concentration of one component in order to make a slight adjustment in spray pattern usually entails a revision of the entire formulation. Aerosol formulations tolerate less adjustment than do conventional household products without loss of character or efficiency. Active ingredients in an aerosol are sensitively balanced and any modification affects the total composition and performance. The initial change of a household product from its ordinary liquid, paste, powder, foam, or emulsion form to an aerosol may bring unpredictable reactions. The most striking example comes from outside the household field-perfumes for personal use. Aerosol seemed to be the ideal vehicle, but in early attempts the character of the fragrance changed noticeably. Years of intensive study were required before the major perfumers were willing to offer their classic fragrances in aerosol packages.

As laboratory work on the formulation of a household product progresses, it is useful to sample consumer reaction as a guide to development efforts. Frequently uncovering potential product deficiencies, the small-scale tests by our pilot panel often lead to refinements which heighten the product's sales appeal. These tests are particularly helpful in the preparation of label instructions and the evaluation of package design. Larger surveys are recommended when the formulation satisfies all technical requirements and appears ready for marketing. These also can be conducted by the consulting laboratory, or by a market research organization.

Before a product is ready for marketing laboratory tests of packaging materials for shelf life, and safety are a must. These should be a routine part of product development. The necessary patent searches, government approvals, and registrations are expedited by the work of a well-qualified technical staff. Technical specialists also can be helpful to the package designer and to the contract manufacturer who handles production.

An investment in expert planning and research begins to pay off with the start-up of production. With a sound product coming off the lines it continues to earn dividends at the supermarket check-out counter.

Huntington Labs

(From Page 80)

ington has solved problems for various industries. One of the recent ones concerned a large poultry plant. As many as half of the chicken pinners in this plant were kept away from work at various times because of skin infections. A Huntington representative suggested they try a medicated soap which is used by surgeons for preoperative scrub-ups. The novel idea was tested and adopted. At the latest report, absenteeism was less than 10 per cent!

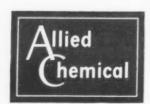
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much absenteeism in U. S. Post Offices. Cuts on hands from sharp edges of letters and packages, became infected and, in many cases, caused losses in working time. Here, too, a Huntington medicated liquid soap was recommended. So effective was the product that the U. S. Post Office Department now authorizes the soap for use by Post Offices throughout the country.

At a hosiery mill many pairs of women's hosiery had to be rejected because rough spots on the inspectors' hands caused snags. A Huntington antiseptic skin cream, which keeps hands soft and free from irritation, drastically cut the hosiery rejects according to Jake Brenn.

Huntington reportedly was the first to develop a broad spectrum germicide. Harmless to any surface which is unharmed by water alone, this germicide was the first such product to feature a lightly perfumed odor, thus starting a trend away from the once-familiar "disinfectant" odor, Huntington claims.

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Another recent development is an urinal blockette which deodorizes by destroying bacteria that create odors, in contrast to the former method of covering up odors with a perfume. The firm offers a new insecticide claimed to climinate 99 per cent of flies, mosquitoes, gnats and other flying insects wherever it is used. Said to be odorless and non-toxic, the product is automatically dispensed.

39 Years with Huntington

Jake Brenn is in his thirtyninth year with Huntington Laboratories, and his invaluable leadership and service must claim a lion's share of credit for the firm's success.

During World War II, he served as a member of the War Production Board Advisory Committee. President Eisenhower recently appointed him a member of the President's Committee on Occupational Hazards.

Jake Brenn is a past president of the Chemical Specialties Manufacturers' Association, and a director of the Association of American Soap and Glycerine Producers. He is a member of the National Association of Manufacturers' Committee on Health and Welfare.

In 1958, he was awarded the honorary degree of Doctor of Humanities by Huntington College.

Jake is an active Rotarian, having recently served as district governor; a past president and past director of the Huntington Chamber of Commerce; president of the Huntington Y.M.C.A.; member of the board of trustees, Huntington College; past president of the Huntington Board of Education; and serves many other local, state - wide and national civic organizations.

His son, Earl Brenn, joined the company in 1939. A graduate of the University of Michigan, with a B.S. in chemical engineering, he is now the executive vice president of the company.

Other members of the firm who have also greatly contributed to the company's success are: Bernard Kroot, laboratory director; Hy Goldenberg, sales promotion and advertising manager; George Dolby, chief chemist; Harry Montague, credit manager; Mary O' Laughlin, Hospital Division office sales manager; John Cull, Institutional Division office sales manager; Wendell Mason, quality control chemist; Don Williams, development chemist; and Sue Kiefer, lab technician.

Another important member of the Huntington team is Thomas Dunn, Jr., manager of the Philadelphia plant. This is the eastern base of operations, known as the Crystal Soap and Chemical Company. It was purchased by Huntington in August, 1953. Tom Dunn is the son of the original owner of Crystal. Earl Brenn heads Crystal Soap as its president.

Huntington's Canadian affiliate, started in 1927, maintains its offices and plants in Toronto, Ont. Donald A. White is the young and energetic president of Huntington Laboratories Limited, whose sales force covers all of Canada.

Brenn's Philosophy

Concluding the most interesting tour of the plant, laboratories and the new offices just recently completed, Jake Brenn stated his business philosophy, which is perhaps the basic reason why he, and his firm, have been successful.

"Our goal has been to produce the very best possible products in our industry, sell them at reasonable and uniform prices to all customers, pay our labor and office and sales people well, and diversify the business sufficiently so as to insure every person working for us a full year's work. with no layoffs. We have adhered to these policies. One result has been that we now have the lowest rate of turnover in personnel, of any firm employing as many people as we do, in the entire State of Indiana."

When asked about the future, Jake commented, "Our policies have brought good dividends to our 130-odd stockholders. I see no reason why they should change."



Surfynols are unique ditertiary acetylenic glycols which are nonionic, nonfoaming surface active agents. Below are five areas where Airco Surfynols are being used. Perhaps they suggest a use for you.

WETTING – Surfynols 102 and 104 are superior wetting agents. A .1% solution of Surfynol 104 in water has a Draves wetting time of 8 seconds. Even lower Draves times result when Surfynol 104 is combined with surfactants having higher Draves times. Surfynol 104's excellent wetting and defoaming properties provide a basis for using it in paints, metal cleaners, rinse-aid formulations, and insecticides.

DEFOAMING – Surfynol 104 is recommended as a defoamer for aqueous systems. This white waxy material is also available in two liquid forms: Surfynol 104E (50% active in ethylene glycol solution) and 104A (50% active in 2-ethyl hexanol). At about .2% concentration, Surfynol 104A or 104E cuts foam in such systems as emulsion paints, paper coatings, and insecticide formulations.

INVESTIGATE SURFYNOLS if lower cost surfactants have not proven satisfactory. Airco's experienced technical representatives are always ready to assist you. For on-the-spot help or information call or write. DISPERSING – Surfynol TG fits the requirements of a nonionic dispersant for emulsion paints and other emulsion and water-based systems. TG is an 83% active mixture of a Surfynol and an alkyl phenyl ether of polyethylene glycol in ethylene glycol solution. It promotes increased hiding power and better color development in emulsion polyvinyl acetate, acrylic or butadiene-styrene paints.

VISCOSITY CONTROL – Surfÿnol 82 (dimethyl octynediol) is most active as an anti-gelling agent. In addition to its use in shampoos, Surfÿnol 82 is recommended for viscosity reduction in vinyl plastisols, aqueous starch solutions, and flexographic inks.

VOLATILE WEITING — Surfynol 61 (dimethyl hexynol) is a volatile wetting agent. Surfynol 61's volatility permits easy elimination from a system after its work is done. One example is in glass cleaning formulations where Surfynol 61 helps solubilize dirt but leaves no film on the glass after cleaning.



AT THE FRONTIERS OF PROGRESS YOU'LL FIND . .



AIR REDUCTION CHEMICAL COMPANY

Represented Internationally by Airco Company International Divisions of Air Reduction Company, Incorporated 150 East 42nd Street, New York 17, N. Y.

Private Label

(From Page 54)

enced man who could devote his full time to the plant operation.

Roger Taylor, a chemical engineer, joined the organization about a year ago as general manager. He was previously associated for 15 years with Stevens-Wiley Co., packager of private label powdered products. Jack Nissenson is production manager and Walter Fedechko is chemical director of the company. They are both graduate chemists.

Mr. Fedechko's duties include supervision of the company's laboratory. It maintains quality control of not only the finished products but also the raw materials coming into the plant. The lab has the final word on chemical and quality standards. Checks are made at all stages of production.

The plant has been almost completely re-equipped in the past few years to keep pace with demand and potential growth.

The laboratory has been enlarged to twice its original size. The plant now has double its former tank capacity. All of the equipment is stainless steel.

Curley now operates three production lines capable of producing 200 cans per minute on each line. Care is exercised in maintaining proper temperatures in storage and control tanks. All pumps and pipelines are also stainless steel.

Curley is one of the few plants of its kind that has dual merchandising and packing equipment

Special techniques help to insure easy checking and recording. Each can is coded, which reveals the date the detergent was packed, batch number, etc.

In the office an IBM system has been established not only for more efficient record keeping but also to compile pertinent market information for customers. This data often shows if a customer is getting his share of the private brand liquid detergent business in a given area.

Mr. Lonker told Soap & Chemical Specialties that the thinking behind this special service is "if we improve our customers' business we improve ours."

Curley's advertising and promotional activities appeal to the supermarket's self interest and desire to make a larger profit margin on its own brand versus national brands. It appeals also to their desire to meet competition; to give the consumer a saving by oflering comparable quality at a lower or competitive price and develop customer loyalty to the store.

A recent Curley mailing piece is a case in point. The cover of this folder was headlined "The Best Deal of All: Your Private Brand Liquid Dish Detergent." Illustration showed a man's hands holding five cards which stimulated a royal flush in poker. Illustrations of detergent cans are used in the center of the ace, king, queen, jack and ten, instead of the regular insignia.

The folder was prepared by the company's agency, Philip Klein Advertising Agency of Philadelphia. Milton J. Feldman is the account executive.

The sales message contained in the folder goes directly to the heart of self-interest. It says:

"Hit the jackpot on one of the most frequently purchased of all household items. Enjoy the prestige and recognition of your own brand.

"Here's your opportunity to start your own private brand with liquid dish detergents without a huge cash outlay, without overstocking.

"These colorful, sales-sparkling, self-selling cans will prove standouts on your shelf. A minimum order of 100 cases—with no turther commitment—gets you started, We'll lithograph your name, brand or logo (on cans—not on a paper label) and deliver direct to your warehouse within days of approval."

A double-page spread in the

folder illustrates some of the private brands produced by Curley. It shows individualized packages of private brands as well as specially designed packages.

The Curley detergents are available in 12, 22 and 32 oz. cans.

An illustration of a standard detergent is also included in the folder with the notation: "Your Brand Here." This same product may be used by a number of companies. The identification of the product is the same, the sales pitch may be the same and directions are the same. Personalized are the brand name and notation: "Packed for such and such a company."

Response to this folder has been excellent. Brokers also make good use of it. The 45 food brokers in the Curley distribution system probably have about 350 salesmen working for them.

Mr. Lonker says that Curley also does considerable research to test new products. A consumer panel of 450 housewives, broken down according to age, economic status and geographical location, has been maintained by the company for the past four years.

"The wives of Curley executives and employees," he said, "have been especially helpful to us in testing products and they do not hesitate to tell us if the new product does the job or not."

Curley Company has come a long way from the hair curl products which gave the firm its unique name to the production of detergents which go into millions of American kitchens every day.

If the private brand liquid detergents continue at this pace, and there is every indication that they will, the plans now under discussion for the new Curley building will soon be a reality.

Dunney Returns from Trip

William H. Dunney, Jr., vice-president and director of the fragrance laboratories at Ungerer & Co., New York, returned last month from a business trip through the northwestern states and Canada.



Stop worrying about its fragrance

do something!

Call van Ameringen-Haebler!

You've got to think of fragrance in any household product you're trying to sell today! Whether it's cleaning compounds, insecticide or furniture polish it must be pleasant to use in the home.

The VAH perfume chemists are skilled and experienced in applying the psychology of scent to every type of product . . .

Let us help you produce a better selling item with fragrance . . . the hidden sales persuader.

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Leading creators and manufacturers in the world of fragrance

Fly Control

(From Page 77)

running headlong across pastures to get away from warble flies. Thus gadding or chasing by the flies probably is responsible for the most important losses caused by these species. A little extra exertion of this kind and milk production goes down. Some dairymen estimate that production is cut as much as 20 per cent during the gadding season. Unfortunately the systemic phosphates "Trolene", (5) and "Co-ral" (6) could not be recommended for use on lactating dairy cattle. They can be safely used on dry cows not due to freshen within 30 to 60 days, but few commercial dairy animals are dry for this long. Young stock can be treated and this is highly advisable since the grubs normally are far more numerous on young animals. Timing of application poses some problems to both beef and dairy farmers. These materials must be administered soon after heel fly activity has ended for the season. In New York this is approximately September 15. We recommend that treatment be applied during October, and not later than December 1. If application is made too early additional eggs may be placed on the animal afterward. If too late some grubs may get to the back, and the dangers inherent in the absorption of dead grubs by the host may be enhanced as the grubs become larger. If a New York beef man expects to sell a group of steers for slaughter sometime between September and January he will make no extra money by treating them during the intervening October since their grubs are not due to appear in their backs until sometime in February. A dairy animal can be treated only if she is dry, or not being milked during the period of from October to December. These dates of course apply only to New York,

or other areas where the seasonal cycle of the heel fly is identical to that in New York.

Doctor J. G. Matthysse, who is in charge of our livestock insect work in New York, and whose recommendations I have been quoting in this paper, finds that both "Trolene" and "Co-ral" are highly effective against cattle grubs under our conditions. "Trolene" works well at the manufacturer's recommended dosage of one bolus (15 grams of "Trolene") for each 300 pounds of body weight. He recommends a .5 per cent concentration for "Co-ral" and finds that effectiveness falls off abruptly at lower concentrations, "Co-ral" has the advantages that it can be sprayed on, and that it also controls cattle lice.

"Dimethoate" (7) also has given excellent cattle grub control but its possible toxic effects on cattle need further investigation.

 An experimental parasiticide not yet commercially available.

New Fairfield Booklet

A new booklet about dairy farm insecticides designed to guide formulators, manufacturers, and users of insecticide sprays was issued recently by Fairfield Chemicals, Food Machinery and Chemical Corp., 441 Lexington Ave., New York 17. The illustrated, sixpage guide includes formulations that use the company's "Pyrenone" piperonyl butoxide—pyrethrins insecticide combination for application from aerosols, back rubbers, power, pump-up, hand and treadle sprayers, and permanent installations.

Dandruff Study Conducted

A report of an independent clinical study recently conducted by three physicians on dandruff treatment appeared in the August 1959 issue of the American Medical Association's "Archives of Dermatology." The physicians used liquid "Enden" dandruff treatment shampoo made by Helene Curtis, New York, in the tests conducted among 210 men and women.

Booklet on Pyrethrum

A paper titled "The History of the African Pyrethrum Industry" by T. F. West, operations executive of African Pyrethrum Information Centre, Ltd., has been reprinted and published as a 19-page booklet by The Royal Society of Arts, London, England. The paper was originally presented by Dr. West before the Society's Commonwealth section last February. It subsequently was published in the May 1959 issue of "The Journal of the Royal Society of Arts."

New West Sprayer

A dry fog of insecticide particles in the "aerosol" range of 12 to 15 microns diameter is produced by a new mobile insecticide sprayer introduced recently by West Chemical Products, Inc., 42-16 West Street, Long Island City 1, N. Y. The units feature five nozzles of novel design. Trade named "Spacemaster" the machine is said to dry-fog insecticides three times faster than conventional two-nozzle sprayers. With a potent insecticide, flying insects in 5,000 cubic feet can be fogged in one minute, crawling insects in two minutes, according to West. Range is 40,000 to 50,000 cubic feet from one position, capacity up to 38,000 cubic feet without refilling.

The new unit was developed for areas where compressed air is unavailable. It is controlled by an automatic, one-hour time clock. Of light weight construction, the sprayer is claimed to be easy to shift and to maintain.



⁵⁾ Registered trade mark, Dow Chemical Co., Midland, Mich.

⁶⁾ Registered trade mark, Chemagro Corp., New York, N. Y.





U-4001 UBATOL A NEW COMBINATION POLYMER

THE PIONEERS HAVE DONE IT AGAIN . . . Through a continued program of applied research, the forerunners of polymer emulsions for the floor finish industry take pride in announcing the development of a new styrene-acrylate co-polymer . . . U-4001 UBATOL. Designed for those who want the toughness and gloss of a styrene with the flexibility and clarity of an acrylate, U-4001 is yours for the testing. U-4001, combining film clarity with a crystal clear transparency, holds the answer to your powdering problems when formulated as specified. It is also non-water

spotting and water resistant. U-4001 belongs on your agenda. Give it a try...for samples and further information, write to the UBS Chemical Corporation, 491 Main Street, Cambridge 42, Massachusetts.



"Pleased? Who wouldn't be! 2-NB is a remarkable solvent!"



2-NP is a powerful economical solvent for vinyl acetate-vinyl chloride co-polymers.

2-NP is a preferred solvent in preparation of epoxy resin finishes.

2-NP is a medium evaporating solvent for acrylic resins.

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2-NP offers ideal evaporation rate with high

solids, low-viscosity solutions, rapid solvent release, high flash point, mild non-persistent odor and fast cutting time. These are some of the distinct advantages that make 2-NP the solvent of choice for a wide variety of protective coatings.

THE ONLY SOLVENT LIKE 2-NP-IS 2-NP! Mail coupon for literature that shows what it can do for you.

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Please send me the Technical Literature I have checked.

- "Roller Coat Vinyl Formulations Made with 2-Nitropropane" - Technical Bulletin No. 4
- "Nitroparaffins As Solvents For Vinylite VYNS-3" Technical Bulletin No. 6
- Cut Costs of Vinyl Solutions with 2-Nitropropane"-Technical Bulletin No. 7
- ☐ "2-Nitropropane As A Solvent in VAGH Vinyl Coatings"—Technical Bulletin No. 10
- "The Nitroparaffins and Their Uses In Coatings" Technical Bulletin No. 11
- "High Solids Vinyl Formulations with Nitroparaffins" - Technical Data Sheet No. 23B
- "Formulation of Epoxy Resin Finishes with 2-Nitropropane"-Technical Bulletin No. 23C.

NAME...... TITLE......COMPANY......

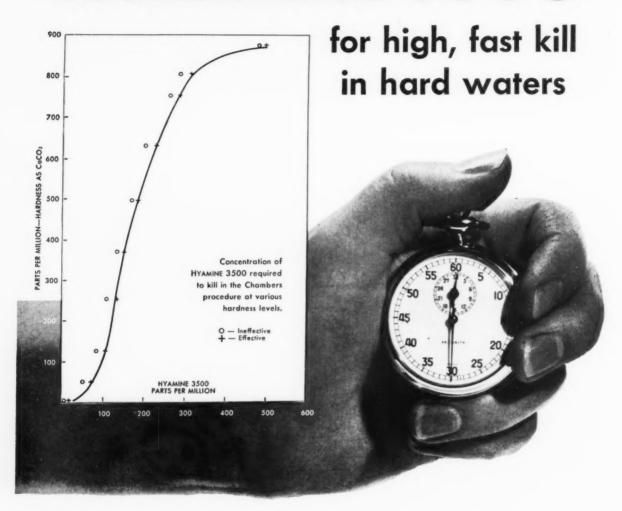
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Industrial Chemicals Department

COMMERCIAL SOLVENTS CORPORATION

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HYAMINE 3500



The harder the water, the tougher it is to kill bacteria with ordinary quaternary germicides. But not so with Hyamine 3500, the germicide formulated especially for high and fast germicidal activity in hard water. For example, in the 30-second Chambers test only 200 ppm of Hyamine 3500 are needed to give 99.999% kill of $E.\ coli$ in water of 550 ppm hardness. Other bacteriological tests and results in the field prove that Hyamine 3500 has a broad spectrum of effectiveness against both gram negative and gram positive organisms.

HYAMINE 3500 has proved its ability to keep bacterial count exceptionally low when pails, machines and utensils are cleaned and sanitized with a detergent-sanitizer based on HYAMINE 3500 and a TRITON detergent. Commercial dairies, restaurants and hospitals also have discovered the superior detergency, excellent grease emulsification, free

rinsing and high germicidal activity of this hardworking team.

Write for bulletins SAN-170-3 and SAN-171-3. They contain information to help you formulate liquid or powdered detergent sanitizers with HYAMINE 3500 and TRITON surfactants.



Chemicals for Industry

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HYAMINE and TRITON are trademarks, Reg. U. S. Pat. Off. and in principal foreign countries.

Floor Polish Latices

(From Page 89)

Within this pH range these polishes deposited equally satisfactory films and exhibited equivalent wet abrasion resistance. Again, the constatnt performance of the films over a range of pH corresponds to the uniformity of light scattering behavior over the same range. Since the styrene acrylic latex particles contain no carboxy material in the polymer chain, the polymer is not influenced by the pH. The drying of the latex film is accomplished in a manner normal for plasticized polystyrene, except that the plasticizing is accomplished internally, within the polymer molecules, by copolymerization with a soft acrylic. The use of an internally plasticizing monomer eliminates the complicated manufacturing step of uniformly post-plasticizing a homopolymer of styrene.

A further virtue is that improved heel mark resistance is obtained. The fact that this styrene acrylic latex polish exhibited improved black heel marking resistance is in agreement with the work done by Drs. Arond and Makower at the Borden Polyvinyl Chloride Department. They found that an internally plasticized polyvinyl chloride copolymer showed far less receptivity to the oils and antioxidant exudations in a heel when compared to an externally plasticized polyvinyl chloride floor tile. Using this analogy we can explain the improved heel mark performance of this internally plasticized styrene acrylic as shown in Figure 16

This panel is a white official asphalt tile first sealed with one per cent polish solution, then treated with two regular coats of polish (treatments one hour apart) at a rate corresponding to 1000 square feet/gallon, and dried for 16 hours at 77°F and 50 per cent relative humidity. The polish shown on the left was prepared from post-plasticized polystyrene, while the coating

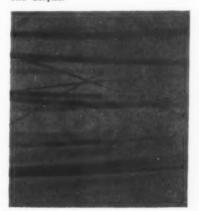
on the right is based on styreneacrylic latex. Heel mark was made with lightly sanded black rubber heel, using uniform pressure across the panel. The panel was then buffed with a soft cloth.

Summary

Two types of latices have been studied over a range of pH both for light scattering and in polish formulations. One of these latices which has carboxy groups within the polymer molecules, shows a pronounced change in its light scattering properties at a pH in the neighborhood of 8.5. At this same pH the latex becomes an excellent film former at room temperature, and polish based on it shows a marked improvement in wet abrasion. The light scattering data and also electron micrographs indicate that these properties are attributable to the opening of the particle structure with increasing pH. which permits incipient coalescence of the particles before they are completely dry.

The other latex, whose carboxy groups are not chemically combined with the polymer, has approximately constant light scattering properties over a range of pH 7.1 to 11. The latex filming characteristics and wet abrasion of polish likewise remain approximately constant over the practical pH range. We interpret this as indicating that the particles of this latex are essentially more compact than

Figure 16. Improved heel mark performance of internally plasticized styrene acrylic.



the carboxy latex type, and achieve most of their coalescence into films during the last stages of drying.

Proper cognizance of these facts makes possible the formulation of superior polishes from both these latices. Further implications of the work described are currently under study in our central research laboratory.

We wish to express our appreciation to several other members of our laboratory, especially to Mr. Dieter Kuhn, who made most of the measurements, and to acknowledge the assistance and cooperation of Mr. James McCorkle, Dr. Jack Dickstein and of our Director of Research, Dr. B. David Halpern.**

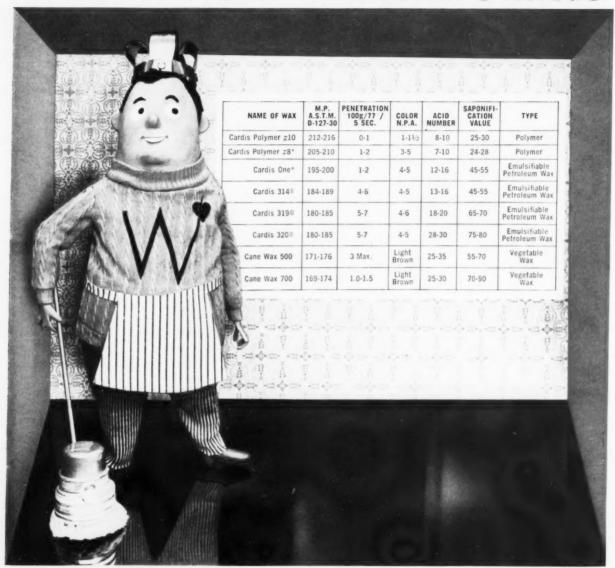
New Hooker Catalog

A newly revised 12 page products list has just been published by Hooker Chemical Corp., Box 344, Niagara Falls, N. Y. Hooker is a major producer of alkalies, including potassium carbonate, caustic potash and caustic soda. It also offers a phosphated alkali intended for use in bottle washing. Groups listed include among others phosphorus compounds, sulfur compounds, chlorides, and chlorobenzenes. The products of Hooker's phosphorus division are covered on a separate two page list. These include sodium hexametaphosphate and tripolyphosphate, tetrasodium pyrophosphate and trisodium phosphate, all of which are primarily used in detergent and cleaner formulations.

Each listing gives the chemical formula, physical data and uses and shipping containers pertaining to the individual product.

Hooker's Durez Plastics Diision at 8 Walck Road, North Tonawanda, N. Y., has published an eight-page illustrated folder describing its products. The wide range of "Durez" resins includes phenolics which are used in wax emulsions and floor dressings where they are claimed to improve water resistance, wear properties, slip resistance and gloss.

WARWICK WAXWORKS



WARWICK WAX WORKS

reflects the brilliant qualities of Willie Waxheart, gentleman of polish, efficiency expert, doctor of floors. He's quick to volunteer his services in resistance to grime whenever there's dirty work afoot. Has earned a spotless reputation for those who enlist his aid.

Write or phone to learn how Willie Waxheart can be of service to you. Technical assistance, samples, prices on request. Warwick Wax stock and service centers in 34 principal cities assure prompt delivery.

Warwick Wax Division—creative wax chemistry for your better products of tomorrow. The Western Petrochemical Corporation, 2 West 45 Street, New York 36, New York, MUrray Hill 7-8220.

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Linalool 'Roche' is more stable than
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Completely new, inexpensive material. Has basic rose type of odor, resembling rhodinol formate or geranyl formate, but with good green note.

Aldehyde-like top note. Stable in soap.

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New Vapor Phase Disinfectant

By Charles E. Feazel and Edward W. Lang

Southern Research Institute*
Birmingham, Ala.

NEW disinfectant, β-propiolactone (BPL) has recently been introduced. Its effectiveness as a vapor-phase disinfectant against bacterial spores has been demonstrated in investigations conducted by the U. S. Army Chemical Corps (1). The present paper deals with problems arising from the application of BPL in this form, namely skin irritation and deleterious effects on metals and plastic materials.

β-Propiolactone, which has the structural formula,

is a colorless liquid exhibiting the following physical properties:

boiling point 155 °C (311 °F) freezing point -33.4 °C (28.1 °F) density (20 4 °C) 1.1490

The compound is characterized by a slightly sweetish, irritating odor. It is a lachrymator and a vesicant. It is somewhat soluble in water (37 parts will dissolve in 100 parts of water at 25 C), and reacts slowly with water to form hydracrylic acid, which is a nonvolatile, water-soluble liquid. The rate of hydrolysis increases with an increase in temperature.

The rate of hydrolysis may be expressed as the half-life, which is the time required for the concentration of β -propiolactone to decrease to

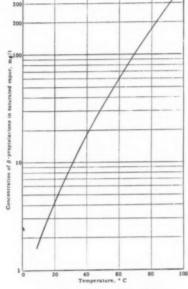


Figure 1. Vapor Pressure of 8-Propiolactone

50 per cent of the starting concentration. The half-life of BPL in water, as a function of temperature, is shown in Table 1.(1).

Table 1. Rate of Hydrolysis of β-Propiolactone

Temperature, °C	Half-life, min.
10	1080
25	210
50	20
75	5

In addition to reacting with water, BPL will also react with organic compounds having active hydrogen atoms, with inorganic salts, and with some metals. It is stable in storage at refrigeration temperatures, but at higher temperatures, it slowly polymerizes to a non-volatile liquid or solid. The rate of polymerization increases with increasing temperature. For example, a sample of BPL was found to solidify after 6 weeks at 130°F.

Figure 1 shows the vapor pressure of BPL as a function of temperature.

Disintectant Action

Investigations by the Chemical Corps (1) showed that BPL is a very effective vapor-phase disinfectant for the decontamination of rooms or buildings. Under conditions of maximum effectiveness, it is approximately 25 times more active against bacterial spores as a vapor-phase disinfectant than formaldehyde and approximately 4000 times more active than ethylene oxide. It lacks the penetrating power of ethylene oxide, but does not have the undesirable persistence of formaldehyde. BPL requires a high relative humidity (75 per cent or higher) for effective action, but is active at relatively low temperatures. Following is a description of a typical test in which BPL was used as a vapor phase disinfectant (1).

A two-story building with a volume of 50,000 cubic feet was contaminated at various locations

Highly effective against bacterial spores beta-propiolactone raises problem of skin toxicity, attacks metals and many plastics

^{*}This work was supported by the U. S. Army Chemical Corps, Fort Detrick, Md., under contract DA 18-064-404-CML-119.



GLOSS?

SCUFF RESISTANCE?

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A COMPLETE WAX SERVICE

But beyond this obvious product quality and completeness of its line, Bareco maintains a fully equipped laboratory staffed by experienced wax chemists to study polish requirements, to work with customers on their wax problems, and to assist them in developing new products.

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POL-59-1

00

with B. subtilis var. niger spores. The interior building temperature was maintained at 24°C, and water vapor was introduced to raise the relative humidity to 80 per cent. Sixteen liters of undiluted B-propiolactone were disseminated in the building as an aerosol by means of a "Todd" Insecticidal Fog Applicator placed at the front entrance of the building. An average concentration of about five mg of β -propiolactone per liter of air was maintained throughout the period of treatment. After a twohour exposure to the disinfectant. no viable spores were recovered from a total of 55 biological samples. The building was habitable after two days' normal aeration. that is, with doors and windows opened. No damage to painted surfaces or metal fixtures in the building was noted.

Vesicant Action

As noted above, BPL is a vesicant. Therefore, when it is used as a disinfectant, it is likely to be a source of skin irritation to those who are using it. The irritation may result, for example, from contact of the exposed skin with BPL vapor or with clothing that has adsorbed the vapor. To provide information on these two sources of skin irritation, experiments were conducted in which the skin of human subjects was exposed to BPL vapor under typical disinfection conditions.

Experimental Techniques

An air-tight exposure chamber was constructed in which the human subject's arm, as well as samples of clothing material, could be exposed to the vapor of β -propiolactone under conditions simulating those used in disinfection.

The chamber, measuring four feet on each side, was made from [s-inch exterior type plywood. It was equipped with a tight-fitting glass-pauelled door for visual inspection of the interior, vapor sampling tubes, and portholes for insertion of the items to be exposed. \$\beta\$-Propiolactone was disseminated as an aerosol inside the chamber by means of a "Tokheim Model 590" Power Atomizer, which uses the centrifugal-disk method of atomization. Circulation of the atmosphere in the chamber was provided by a slow-speed fan driven by a shaft through

a packing gland in the chamber wall. Steam was introduced into the chamber to provide essentially saturated air and to control the temperature.

The clothing materials used in these experiments were cotton herringbone twill, boot leather, rubber, spun nylon, and worsted. They were chosen as representative of materials used in normal wearing apparel.

The β-propiolactone used was a commercial grade (96 per cent), obtained from B. F. Goodrich Chemical

In each test, after the β-propiolactone had been disseminated as an aerosol in the exposure chamber, a sample of the chamber air was taken and analyzed for the content of β-propiolactone vapor. A period of 30 minutes was allowed between dissemination and sampling so that aerosol particles might settle out in the chamber. The analytical method used has been described by Hoffman and Warshowsky (1).

Concurrently with sampling the chamber air, circular patches, 12-inch in diameter, of the wearing materials were exposed in the chamber for 30 minutes. The exposed patches were then applied to the subject in the region of the back below the shoulder blade. Each subject received one patch of each type of wearing apparel. The patches were held in place with adhesive bandages and adbesive tape, in such a way that the air had little access to the patches. The patches were left in place six hours. The skin was examined when the patches were removed and on the following and subsequent days.

The forearms of human subjects were exposed to β-propiolactone vapor in the exposure chamber in tests designed to determine, first, the reaction of bare skin to the vapor and, second, the protective effect of cotton clothing.

An arm band 3.5 inches wide made from cotton twill was fastened loosely around the wrist. The forearm was then inserted in the exposure chamber at the same time that the chamber air was sampled. The forearm was exposed to the vapor for 10 minutes. It was then withdrawn and the arm band left in place for six hours. The skin was examined when the arm band was removed and on the following and subsequent days.

Results and Discussion

Patch tests. At a β-propiolactone vapor concentration of 1.5 mg/l, a temperature of 64 F, and a relative humidity of 92 per cent, six of 10 subjects showed slight crythema after six hours contact with rubber patches; three subjects showed slight to moderate crythema under leather patches; and one subject showed slight crythema under the wool patch.

At a β -propiolactone vapor concentration of 1.6 mg/l, a tem-

perature of 78 F, and a relative humidity of 100 per cent, eight of 10 subjects showed slight to moderate erythema under rubber patches; five subjects showed slight erythema under leather patches.

At a β-propiolactone vapor concentration of 1.7 mg/l, a temperature of 79 F, and a relative humidity of 100 per cent, six of six subjects showed slight to moderate erythema under rubber and leather patches after six hours contact: three showed very slight to slight erythema under wool and cotton patches. On the following day, four subjects showed 100 per cent vesiculation and two showed slight to moderate erythema from leather patches; two subjects showed 100 per cent vesiculation and three showed slight to moderate erythema from rubber patches. One subject showed slight erythema from the wool patch.

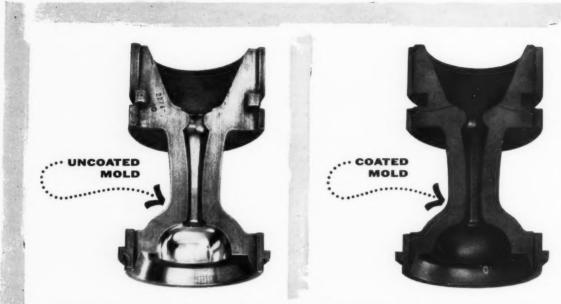
These results indicate that rubber or leather when exposed briefly to 1.5-2 mg/1 of β -propiolactone vapor and then worn in close and confined contact with the skin can cause a severe reaction. Since the concentration range of one to two mg/1 is used in disinfection, these results show that care must be taken to avoid this source of skin irritation by persons carrying out the disinfecting.

Arm exposure tests. The results of these tests are shown in Table 2. Moderate to severe reactions were observed on bare skin exposed to 1.5-2 mg 1 of β -propiolatone vapor. The cotton arm bands provided excellent protection under these conditions. The skin under the arm bands showed no erythema after exposure.

Subject 13 began to show moderate erythema on the exposed skin within two hours after exposure to a vapor concentration of 1.4 mg 1. The arm band was removed at this time and the arm and hand were rinsed with a dilute sodium thiosulfate solution, a specific neutralizer for β-propiolactone. Subject 16 noted a recurrence of more intensive erythema and vesiculation two weeks after ex-

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posure. After the third week, the reaction subsided.

The results in Table 1 show that 16 out of 17 subjects experienced slight to moderate erythema and some vesiculation of β -propiolactone vapor concentrations of 1.3 to 1.8 mg/l when the chamber temperature was 88 F. At a slightly lower temperature, the same concentrations of β -propiolactone had much less, effect.

Metal Corrosion by BPL

A study of the corrosion of various metals by BPL was made for two purposes: to indicate the types of metal equipment that might be damaged when disinfected with BPL vapor, and to aid in selecting metals that could be used in disseminators for BPL. Therefore, corrosion tests on common metals were made under three conditions: with the metals immersed in BPL or in its solutions; with the metals exposed to BPL vapor; and with the metals exposed to fallout from aerosol droplets of BPL.

Immersion Tests

Test specimens of the 14 metals shown in Table 3 were suspended on glass hooks in BPL, in a mixture of BPL and water (80:20 by volume), in a mixture of BPL and carbon tetrachloride (50:50 by volume), and in mixtures of BPL, carbon tetrachloride and water (45:45:10 and 70:20:10 by volume). Carbon tetrachloride was chosen as an example of an inert, non-flammable organic solvent. A mixture of carbon tetrachloride and water (90:10 by volume) was also used in the corrosion tests. Two temperatures were used: 70°F and 130°F. Duplicate test specimens (1 in. x 2 in. x 1/16 in.) of each metal were used in separate containers. The specimens were marked, polished, degreased, and weighed according to recommended procedures (2).

The specimens were removed after 23 days in the tests at 70°F and after 16 days in the 130°F, tests. They were then cleaned and reweighed, and the corrosion rates shown in Table 3 were calculated from the following equation:

mils penetration per year, mpy = 534 W

DAT DAT

where W=weight loss, mg
D=specific gravity of metal
specimen

A=surface area of specimen, sq. in. T=time of exposure, hr.

The results show that BPL

Temperature, °F°	78	75	78	78	87	89	88
3-Propiolactone							
concentration, mg/l	1.50	1.05	0.50	1.90	1.30	1.80	1.40
	Reac	tion of 1	Exposed	Skin'			
Subject							
1					1		
2							1
3							3
4							1
5	0	0	0	0	0	2	
6		0	0	0		3	
7	0	3					
8	0	0				3	
9			0		3		
10	1				3		
11		0	0	0		3	
12	0			0	2		
13							4
14					2		
15	0	0	0			2	
16							3
17							1
18				0		3	

alone or mixed with water or carbon tetrachloride does not cause serious corrosion of most common metals or alloys. Assuming that a corrosion rate of 30 mils (0.03 inch) penetration per year can be tolerated, only one combination of solution composition, temperature, and metal resulted in an excessive corrosion rate. This set of conditions was with 2024 aluminum in a mixture of BPL, carbon tetrachloride, and water at 70 F.

The relative corrosiveness of the various solutions on steel indicates that only those solutions containing water caused a measurable rate, and this was very slight. In the case of brass and aluminum, the combination of water and chlorinated solvent with BPL caused a greater rate of corrosion than water plus BPL.

The corrosion rate caused by BPL alone is very slight at either 70°F or 130°F. Measurable, but low rates were observed on brass and galvanized steel (two and three mpy, respectively).

The results also indicate that at 130°F, BPL will not attack 316 stainless, 1100 aluminum, or

nickel. Only mild steel among the metals used was attacked (27 mpy) and this was by the BPL-carbon tetrachloride solution.

The over-all conclusion from these tests is that solutions of BPL in typical solvents will not seriously attack most metals and alloys at temperatures of 130-F or less. Solutions containing chlorinated solvents, water, and BPL might cause appreciable rates of corrosion under certain conditions. Stainless steels, monel, and 1100 aluminum were particularly corrosion resistant.

Aerosol Fallout Tests

The effect of simulated fallout of BPL aerosol particles was determined on the 14 metals listed in Table 3.

Triplicate specimens were used, after the specimens were prepared as described above, they were mounted with a flat side upward in shallow pans of solid paraffin wax so that only the top surface of each was exposed. To simulate the exposure due to aerosol fallout, the top surfaces of the metal specimens were wetted with a measured amount (0.1 ml) of commercial-grade \$\theta\$-propiolactone. One set of specimens was kept at 70°F and the other at 130°F, both at a high relative humidity (90 to 95 per



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cent). The specimens were rewetted with β -propiolactone again after 15 days. After approximately 30 days, the metal specimens were removed, cleaned of corrosion products, weighed, and the corrosion rate calculated.

The results of these tests showed that negligible corrosion rates would result from aerosol fallout of BPL, even at 130 F. The greatest corrosion rate was only 0.7 mpy and the greatest weight loss 63 mg/sq inch.

These rates were obtained with cast iron at 130 F. Weight loss with mild steel amounted to 36 mg at 130 F and 19 mg at 70 F, and with the other metals it scaled down to zero.

In case of aerosol fallout on equipment in a building or a warehouse, these corrosion rates might be serious because a slight effect on the metal surface might impair subsequent use of the equipment. On brass, copper, nickel, and monel specimens, a green coating appeared. Chrome plate, galvanized steel, and tin plate were attacked. Cast iron and steel were badly rusted and had corrosion pits. Only stainless steel 304 showed no signs of attack and stainless steel 316 and aluminum 2024 showed very little.

β-Propiolactone polymerized to a viscous liquid on all specimens at 130 F and on most of the specimens at 70°F. The effect of temperature was not as great as found in the liquid-phase tests. The corrosion rate at 130°F was about double that at 70°F.

Corrosion by BPL Vapor

The corrosion caused by BPL vapor, in the presence and absence of water vapor, was determined for the 14 metals used in the previous tests. Triplicate specimens were suspended in separate scaled eight-ounce jars above 20 ml of BPL and above 20 ml of a 50-50 (by weight) solution of BPL and water. One set of jars was stored at 70°F for 52 days and one set was stored at 130°F for 46 days.

The corrosion by moist and anhydrous BPL vapor on typical metals was slight at 70°F and 130 F. However, the damage to precision equipment due to such exposure might be much more serious than the corrosion rates indicate. The maximum corrosion rates were 0.5 and 0.7 mpy for mild steel and cast iron when exposed at 130 F to vapor above a 50 per cent solution of BPL in water. In most cases, the corrosion rates were roughly 10-fold greater at 130 F than at 70°F. The presence of moisture in the BPL vapor accelerated the rate of corrosion for most metals, but decreased the rate for those containing copper and zinc. Stainless steel 304, stainless steel 316, chrome plate, and monel showed no visible attack under any condition. Aluminum, brass, copper, nickel, tin plate, and galvanized steel were attacked and exhibited pitting and etching. The iron and mild steel specimens were badly pitted at 130°F in moist BPL vapor.

Even though most of the metals were attacked by the vapor, it should be remembered that the conditions of exposure of these specimens (130°F and 46 days) are much more severe than will be experienced when equipment is decontaminated by being exposed to BPL vapor for only a few hours.

Attack On Plastics

To study the effect of β-propiolactone fallout on plastics, one inch by four inch specimens of typical molded plastics and a few plastic films were prepared from the eleven commonly used plastics given in Table 4. The specimens were placed horizontally on an aluminum sheet. The exposed surface was covered by a piece of lens tissue to insure uniform wetting of the surface area. BPL (0.05 ml)

Table 3. Corrosion of Metals in Solutions of \(\beta\)-Propiolactone, Corrosion Rates in Mils Penetration per Years

Solution Component Ratio		Temperature =	70°F	Temperature =				
	BPL 100	BPL, H ₂ O 80-20	BPL, CC1, 50-50	BPL, CCl ₁ , H ₂ O 45-45-10	CCI, H,O 90-10	BPL 100	BPL, CC1 50-50	
Metal		,						
Metal								
yellow brass	1.9	0.9	0.05	13.0	0			
mild steel	0	4.5	0	4.8	5.1	0.1	27.4"	
304 stainless	0	0	0	0	0			
316 stainless	0	0	0	0	0	0.1	0.1	
monel	0	0.6	0	2.3	0			
2024 aluminum	0	0	0	114	11.6	2		
cast iron	0.2			(70-20-10)				
				28.0				
red brass	1.3			18.5				
1100 aluminum	0			2.0		0.2	0.2	
copper	0.1			18.8				
nickel	0			0.9		0.1	0.1	
galvanized steel	3.0			22.5				
chrome plate	0			5.0				
tin plate	0			4.4				

^{*} Each result is average from dup!icate tests.

b Liquid polymerized to a solid before test was completed,



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Product Application—A Snell client in the paper industry, for whom we had developed a fine additive, wanted to explore uses in other fields. Unfortunately, their highly qualified staff's experience was limited to the one field. Snell, with experts in practically every product field, found the new product has potentialities as both a good emulsifier and a paint plasticizer. Only the very largest manufacturing companies can duplicate the breadth of experience and background the Snell "brain-trust" of technical experts can offer you!

Product Improvement — One Snell client found their product, an adhesive bandage, slipping in quality. Tape was going gooey in storage on druggists' shelves. Snell research helped this client bring his product quality up to equal the best on the market, and retain his share of sales.

Product Evaluation—A Snell brewery client wanted to expand production and take advantage of a more efficient production technique but feared the taste of the beer might suffer. Snell food technologists, taste panels, and engineers checked the new process and hundreds of samples of beer made under new and old systems, recommended the switch to the more profitable modern process. The change went unnoticed by the customers, and sales continued to climb.

Market Research—A Snell client with a waste product had briefly considered building a plant to use it to manufacture another product; but had given up after their own brief survey showed the new product to be already overproduced. When they consulted Snell for checking, however, Snell predicted there would be a shortage within three years. The client waited two years, built the plant—and now has a profitable new product instead of a waste!

Toxicology—One of the largest frozen food companies began getting complaints on the flavor of one of their green vegetables. Since hundreds of thousands of dollars were at stake, they consulted Snell to find out what was wrong. Snell by analyzing tests, and checking on the farm, was able to prove that the taste—actually toxic—was due to a new type of insecticide sprayed on the fields hundreds of yards away on a windy day long before the harvest!

Engineering—A large midwestern firm desired to produce its own brand of instant coffee, to possess outstanding flavor, body, and bouquet. They engaged Snell to design their extraction line, which is now economically producing a superior product, and have since doubled capacity. Since that time, two additional plants have been modified under our supervision to increase production and improve product characteristics.

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was uniformly spread over each sample with a hypodermic syringe. The specimens were stored for 17 days at 100°F in an atmosphere saturated with water. Additional 0.05 ml portions of BPL were placed on the specimens at intervals of approximately eight hours. Twenty-four additions were made. It was observed that approximately 5 hours elapsed before the 0.05 ml of BPL had completely dried from the tissue on the specimen. Therefore, 24 additions of the BPL to the specimen were equivalent to approximately 120 hours of exposure to fallout. The action of the BPL on the plastics was evaluated by visual observations.

After approximately 120 hours of being wetted with simulated fallout of BPL at 100°F, nylon and polystyrene were the only plastics among 11 common plastics that were greatly affected. They had disintegrated. "Mylar" (E. I. du Pont de Nemours & Co.) and poly vinyl chloride were deformed somewhat by the same exposure. This deformation may not occur in samples of greater thickness. All specimens showing a marked effect. were films. Weight changes varied from a loss of 66 mg square inch to a weight gain of 31 mg/square inch. There seemed to be no correlation between the weight change and the visible changes in the speci-

Vapor Effect on Plastics

The effect of BPL vapor on plastics was determined by storing duplicate plastic specimens (one inch by two inches) in sealed jars at 100 F for 23 days. The jars contained separate containers of BPL and of water to provide an atmosphere saturated with both BPL and water.

Nylon and poly vinyl chloride were the only plastics visibly affected by exposure for 23 days to an atmosphere saturated with BPL and water at 100 F. The nylon completely disintegrated. The poly vinyl chloride lost its rigidity and changed from a colorless, semitransparent to a white translucent

material. The acrylic, epoxy, melamine, "Mylar", phenolic, polyethylene, polystyrene, and polyurethane plastics appeared to be inert and no change in tensile strength was noted.

The effect of liquid BPL on plastics was evaluated by placing triplicate specimens one inch by four inches in commercial (96 per cent) BPL at 130 F for 21 days. Visual observations were made throughout the test.

"Mylar" was the only plastic which showed no apparent effect after storage in liquid BPL for 21 days at 180°F. Polyethylene showed only a slight change. All of the remaining plastic materials were severely affected.

Table 4. Plastic Materials Evaluated

Acrylic ("Plexiglas" of Rohm & Haas Co.) sheet

Epoxy ("Epon 828" of Shell Chemical Corp.) casting

Melamine-formaldehyde casting

"Mylar" (E. I. du Pont de Nemours & Cc.) film

Nylon film

Phenol-formaldehyde casting

Polyethylene film

Polystyrene film

Polyurethane foam

Poly vinyl chloride film

The acrylic formed a gel, the epoxy darkened and cracked, nylon disintegrated, the phenolic blistered, the polyurethane swelled, and the poly vinyl chloride became opaque and distorted.

Acknowledgments

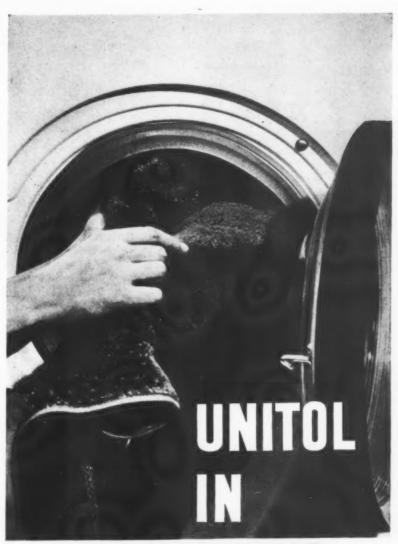
The assistance of Edgar A. Verchot and Jeannette Esslinger in performing the experiments is gratefully acknowledged.

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 ASTM Test Methods A279 and B-185.

Waldon Heads Sta-Pine

R. Joe Waldon was recently appointed president and general manager of Sta-Pine Products, Inc., Shreveport, La., manufacturers of detergents and disinfectants.



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New Water Soluble Resins

A new series of water soluble ethylene maleic anhydride copolymers became available in commercial quantities recently from the plastics division of Monsanto Chemical Co., Springfield, Mass. Designated DX-840, the new resins come either as an anhydride, free acid or amide ammonium salt. Each of the resins is available in three molecular weights: low, intermediate and high. Cross-linked versions of the anyhydride and amideammonium salt are also offered.

Among the numerous uses suggested for linear or cross linked EMA and its derivatives are stabilization of liquid detergents containing polyphosphate; thickening of emulsion cleaners and polishes; as suspending agents in cleaning compounds, in agricultural spray insecticides, fungicides and herbicides.

A detailed description of these resins and their actual and potential applications is given in a 12 page bulletin (No. 1066) which may be obtained from the plastics division.

ISM Forms New Committee

A new sustaining members committee has been formed by the Institute of Sanitation Management, New York, it was announced last month by Edwin S. Doyle, ISM president. Purpose of the new committee is to maintain a closer contact between the Institute's active members, who are sanitation maintenance administrators, and its sustaining member firms, which are manufacturing and distributing companies.

Among representatives of manufacturing and supply firms which were appointed to the new committee are:

Clarence L. Weirich, C. B. Dolge Co., Westport, Conn.; Donald Doheny, Vestal, Inc., St. Louis; W. S. Jessup, U.S. Sanitary Specialties Corp., Chicago; Gerard E. Smith, Airkem, Inc., New York; Gordon S. Bodek, Bobrick Dispensers, Inc., Los Angeles; J. Carl Dawson, Ferguson Fumigants, Inc., Ferguson, Mo.; Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind.; W. James Reider, George T. Johnson

Co., Medford, Mass.; and Henry H. Hidell, West Chemical Products, Inc., Long Island City, N. Y.

First meeting of the committee is scheduled for Sept. 21st at the Hotel New Yorker, New York, in connection with ISM's annual meeting and Sanitation Maintenance Conference and Show.

Also announced were new sustaining members of the Institute including Diversey Corp., Chicago; Klenzade Products, Inc., Beloit, Wis.; Minnesota Mining and Manufacturing Co., St. Paul, Minn.; and Oakite Products, Inc., New York.

CSMA vs. Certification

How individual firms can meet the product certification programs promoted and pursued by the American Hotel Association and other groups is summarized in a seven point guide published recently by the Chemical Specialties Manufacturers Association.

CSMA recently reaffirmed its opposition to the practice of product certification. The association is pledged to advise the organizations involved not only of its position but also of the reasons prompting it.

In accordance with avowed policy, CSMA is now counseling its members to follow seven main points:

- Obtain the specifications for products that are expected to be placed on the list. Write direct for these to the headquarters of the organization involved.
- Have product thoroughly checked to determine whether it meets or exceeds specifications.
- 3. Furnish your sales department with complete data to show that your product is equal to or better than the minimum requirements of the association of which the customer is a member. Be prepared to offer an affidavit to this effect to the customer. (The American Hotel Association is accepting affidavits from companies that the product for the second year of certification is the same as the original material.)
- 4. Point out that many of the products for which certification is offered are quality controlled by Federal and State laws. In certain cases registration with government agencies is required. Among the products controlled and policed by laws are insecticides, fun-

gicides, disinfectants, sanitizers, foods, drugs and cosmetics. At present there are laws being enacted on so called "hazardous substances" which may require further product control. It would appear that at least these products are amply "certified" to the consumer.

5. Every manufacturer is always responsible for his product and the claims made for it. Certification by an association is no assurance that trouble may not develop with a product. The responsibility of the manufacturer is far more important on the matter of product, container, label, use and performance.

 The cost of certification of products must be paid by the consumer in the price. The price will be greater without direct benefit to the buyer.

 There can be no objection to a buyer checking a purchase in a laboratory at his own expense.

CSMA proposes to submit these points to all groups now issuing certification lists, all groups making products within the scope of those requiring certifications, and eventually to the press.

Currently the trade association is requesting member companies to express their opinions and make recommendations on the subject.

Reader Sees It

(From Page 39)

contribution or encouragement are advancing the cause of protecting the consumer by means of proper precautionary labeling.

Dr. E. G. Klarmann, Chairman, Precautionary Labeling Committee, Chemical Specialties Manufacturers Assn., New York

And while bouquets are being tossed, it would not be amiss to aim one at Dr. Klarmann, himself. His knowledge, tact and diplomacy were an immense help in securing the support of a number of divergent groups for the bill considered at the August 13th hearings, Dr. Klarman acted as the spokesman for these groups as a witness at the hearings reported on in the September issue of Soap & Chemical Specialties. Perhaps he feels that because his name was mentioned so frequently in that report the impression might be left that he was solely responsible for the bill and the work going into it. His name was mentioned because he was the leading witness, a job for which he was

selected because of his capabilities and efforts on behalf of the bill. Ed.

Beard Title

Editor:

In the August issue of Soap & Chemical Specialties on page 19 in the article on the upcoming CSMA Aerosol Clinics, you referred to Walter Beard as manager of Risdon's aerosol division. Walter's correct title is director of research, The Risdon Manufacturing Co.

No harm done, but I thought you might like to have the exact title for your files.

Letitia Cunningham Norman A. Schorr & Co. New York, N. Y.

Our thanks to sharp eyed Miss Cunningham, whose firm does Risdon's public relations work. We're sorry about the error, which was made from habit. Walter's job is a new one, and it took us a month or so to get the hang of it. He is correctly labeled in our story of the Aerosol Clinics in the September issue of Soap, Ed.

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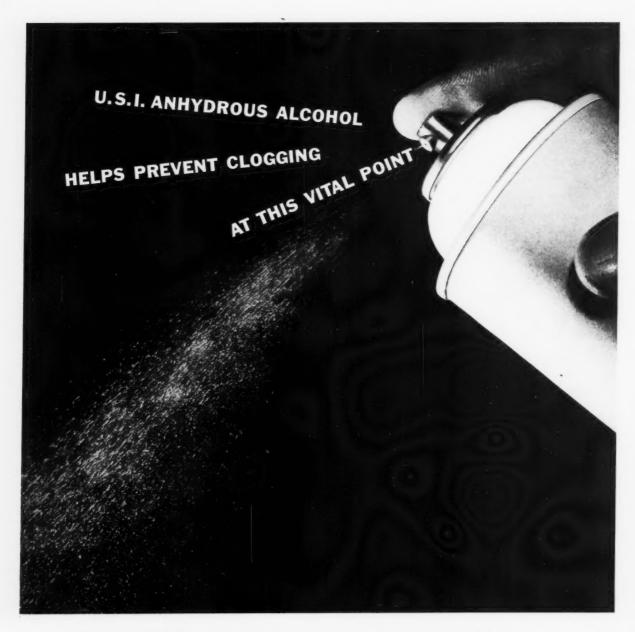
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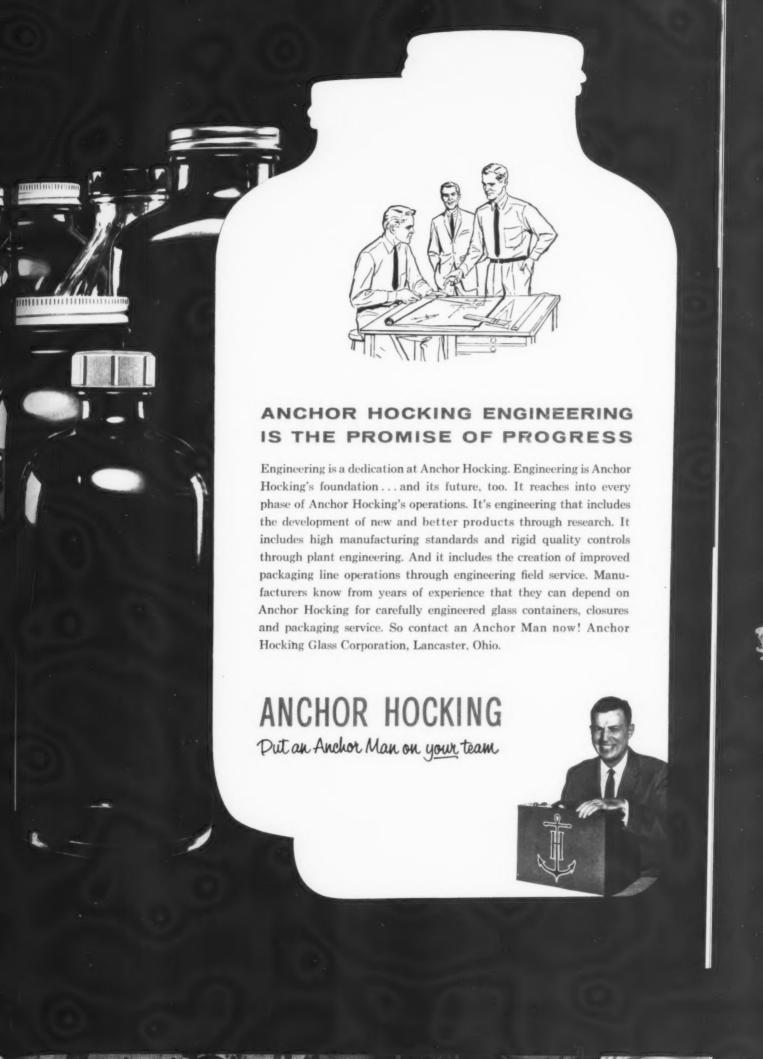
Modern glass bottles and new label design have been adopted for its "Lemon Shampoo" by T. Noonan Sons Co., Boston. Three and six-ounce bottles by Owens-Illinois Glass Co., Toledo, are styled with handy-grip and feature vertical ribbing at base. Deep-skirted, red plastic closure contrasts with product color. Labels by Stecher-Traung Lithograph Corp., Rochester.

Automotive Chemicals Cleaners Detergents Deodorants Disinfectants Floor Products Insecticides Laundry Bleach Metal Cleaners Moth Products Polishes Shampoos Shave Products Soaps Liquid Starch Toiletries and other Chemical Specialties

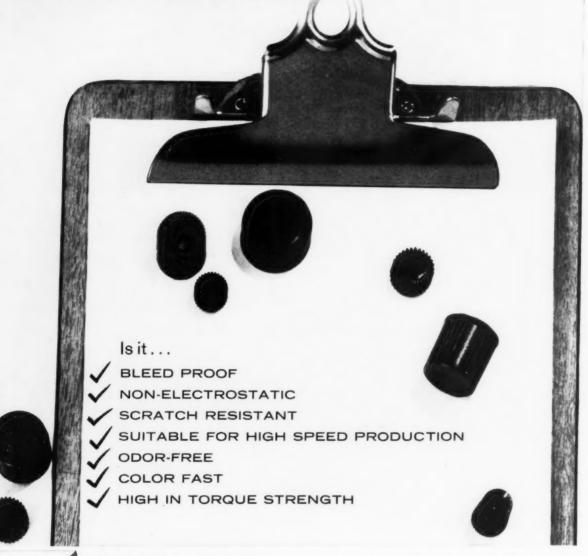
A market for over 28 billion packages annually







HOW DOES YOUR PRESENT CLOSURE MATERIAL STAND UP TO THIS CHECK LIST?



Plaskon Wood-Flour Filled Urea combines all these advantages!

Leading manufacturers are fast discovering that brown or black Plaskon Wood-Flour Filled Urea is their best buy. Reasons: Wood-Flour Filled Urea has been thoroughly tested and proved in commercial manufacturing equipment. Three years of pre-production research show that it's more economical, yet matches even more expensive closures in all pertinent physical properties.

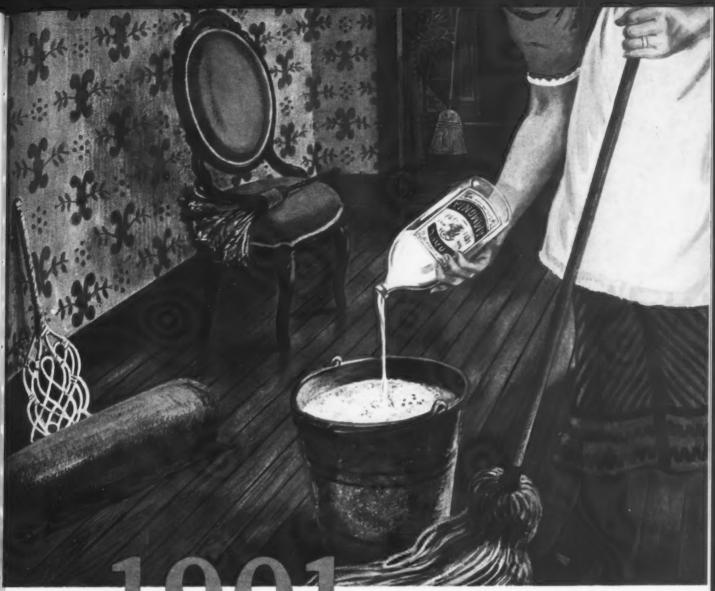
With current competitive price structures ever tightening, the multiple advantages of this low-cost PLASKON thermosetting compound make it ideal for all closure needs.

For information on how YOU can save MORE and profit MORE with PLASKON Wood-Flour Filled Urea, write or phone for technical data and molded samples.

PLASTICS AND COAL CHEMICALS DIVISION

40 Rector Street, New York 6, N. Y.





... Those were the days when the hard-working housewife had only

her handy, all-purpose bottle of household ammonia by her side. Today, a shining parade of household products, packaged in immaculate glass containers, line the shelves of modern stores and modern homes. And Metro makes life easier for you, too, by studying your product thoroughly and working out an individual plan based on the most attractive package. When it comes to creating quality glass containers that are right for your product and right on time, count on *metromatic*...when you need it!



MANUFACTURERS OF QUALITY GLASS CONTAINERS

METRO GLASS

METRO GLASS COMPANY, INC., GENERAL OFFICES: JERSEY CITY, NEW JERSEY



PACKAGING NOTES

Britt Heads Demuth Glass

Frank W. Britt was recently elected president of Demuth Glass Works, Inc., Parkersburg, W. Va.,



Frank W. Britt

a subsidiary of Brockway Glass Co., Brockway, Pa. F. B. Hess, president of Brockway, was elected board chairman of Demuth. In the glass container industry since 1933, Mr. Britt served in the glass container section of the War Production Board for two years.

Glass Strike Effects Grow

The effects of a strike which began on Sept. 13th by the 2,000 man mold-making department of the A.F.L.-C.I.O. American Flint Glass Workers Union continued to grow as this month's issue of Soap and Chemical Specialties went to press. Although the strikers comprise only three per cent of the work force in the glass container industry, they perform the vital task of turning out the steel forms or molds which receive molten glass and shape it into containers and which, in many instances, are frequently replaced. Many consumers of glass containers including the chemical, cosmetic, and drug industries which are among the largest, are beginning to feel the effects of the strike. Some glass container

plants have had to close or curtail operations as their molds went out or as other workers refuse to cross the mold-makers' picket lines which are around plants accounting for 90 per cent of industry production. Many firms cannot take on jobs which require new molds. Until this strike the industry has never had to operate more than 10 days without mold-makers, according to A. J. Martin, director of labor relations for the Glass Container Manufacturers Institute.

Negotiations for settling the strike are still being held. The union wants a five per cent increase in wages and the industry is offering three per cent with the feeling that anything higher would have to be passed along in the form of higher prices. The industry also wants a new contract eliminating hiring rules contained in the old pact which forbid a company from hiring a non-union worker if any union man wants the job.

Can Labor Pacts Extended

Contracts between the United Steelworkers and American Can Co. and Continental Can Co., both of New York, which were to have expired on Sept. 30th have been extended until Jan. 1, 1960 or until 30 days after settlement of the strike in basic steel. The contracts cover about 50,000 workers employed by the two major can makers. Negotiations began Sept 14 between the union and the two companies in an attempt to write new contracts, but were discontinused and postponed until Sept. 30 when agreement on the contract extension was reached.

Canco Names Dowling

The appointment of Fenton J. Dowling as manager of the marketing division of the sales department at American Can Co., New York, was announced recently by Robert C. Stolk, vice-president of sales for the Canco division. Mr. Dowling succeeds Edward K. Walsh who has been appointed an assistant to the vice-president of the division's sales department.

Cellu-Craft Names Belmuth

Appointment of Harold M. Belmuth as general sales manager for Cellu-Craft Products Corp., New Hyde Park, N. Y., was announced last month by Samuel J. Leeds, president. Cellu-Craft is a designer, printer, and converter of flexible packaging materials. With St. Regis Paper Co., New York, for the past 12 years, Mr. Belmuth was general sales manager of that company's Chester Packaging division since 1957.

Mr. Leeds also announced that Joseph W. Scott continues as vice-president of marketing.

New plant recently opened in Brampton, Ontario, by Ivers-Lee Co. (Canada), Ltd. Facilities duplicate all flexible unit packages and services produced by Ivers-Lee Co., Newark, N. J., for the cosmetic, pharmaceutical and food industries. The new plant is staffed by Canadians trained at the Newark plant and utilizes the same type of package making machinery found at Newark.





For the first time, a one-piece molded plastic closure for I-style or round metal cans. Cap snaps back, *stays* back as product is poured. Cap snaps down, *stays* down . . . locks as it closes. And because the cap is part of the fitting, it can't get lost.

These new plastic closures provide sales appeal and convenience . . . with economy! They are ideally suited to containers for products such as household cleansers, lighter fluids, polishes, and automotive products. They also give added sales appeal to packages for dry granulated products. Interested? Get the full story on Canco's new snap-lock captive caps from your Canco salesman.

AMERICAN CAN COMPANY



NEW YORK • CHICAGO NEW ORLEANS • SAN FRANCISCO











SOAP and CHEMICAL SPECIALTIES

New Contract Packager

A newly formed company, called Packaging Services, Inc., recently entered the contract packaging field and has opened offices and a fully equipped plant at Foot of Madison St., Wilmington 99, Del. According to A. J. Gordon, president, the company is equipped to handle any type of flexible film packaging for liquid, powder, or tablet -products in the chemical, cosmetic, and pharmaceutical industries.

Features of the new plant are a six car railroad siding, humidity and temperature controlled sections for special applications, and three color flexographic presses for printing on various kinds of film. Company engineers designed all of the firm's high speed packaging machinery. Mr. Gordon was formerly with Gordon Chemicals, Inc., Wilmington. Another executive of Packaging Services is A. Jacobs, package machinery designer.

Colbert of O-I to Retire

James W. Colbert has relinquished his duties as assistant eastern regional sales manager for the glass container division of Owens-Illinois Glass Co., Toledo, O., to work on special assignments pending his retirement, it was announced last month by Sid F. Davis, division vice-president and general sales manager. With the company for 47 years, Mr. Colbert has been in the New York branch for the past 43 years. He was named assistant regional manager in 1950.

Also announced was the appointment of Robert F. Miller as eastern regional sales manager for the division succeeding Clark L. Rodgers, who has assumed special duties. Previously Mr. Miller was manager of the New York branch and has been replaced in that post by Herbert C. Gstalder, Detroit branch manager.

Mr. Miller joined O-I in 1941 and was in the company's drug and chemical division before becoming New York manager two years ago.

. With the firm for the past 25 years, Mr. Gstalder was in his former post since 1947. Mr. Rodgers joined the company in 1922 and was named eastern regional sales manager 17 years ago.

Can Shipments Increase

Metal can shipments during June showed an overall increase of 8.8 per cent compared with the same month in 1958, according to the Can Manufacturers Institute, Washington, D. C. Shipments for the first six months of this year were 2.2 million tons, or 5.3 per cent more than a year ago.

Canco Adds Coil Center

*---

American Can Co., New York, recently announced that it is installing the ninth unit in its national network of coil processing centers at its Halethorpe, Md., plant. The new Baltimore area center will produce can making sheets from coils of tin plate and is scheduled for operation by Dec. 1, according to Robert B. Thompson, vice-president of manufacturing for the Canco division. The new plant will supply scrolled sheets, which are used to fabricate ends for metal containers, to seven Canco plants on the eastern seaboard. The company's first coil center was opened in May 1957 as the initial step in a \$32 million program. Canco now buys approximately 85 per cent of its tin plate requirements in coils and processes them into sheets of can making specifications, an operation formerly performed by the steel mills.

Continental Earnings Rise

Net income in the first half of this year for Continental Can Co., New York, amounted to \$19,267,000, or \$1.54 per common share, compared with \$16,958,000, or \$1.44 per share, in the first six months of 1958. Net sales and operating revenues rose to \$535,354,000 from \$498,702,000 in the 1958 first half.

Thatcher Names Welsch

Jack Welsch has joined Thatcher Glass Manufacturing Co., Elmira, N. Y., as vice-president of glass container sales, it was announced last month by William J. Green, president. Mr. Welsch formerly was vice-president of marketing for O. M. Scott & Sons, Maryville, O.

New Anchor Hocking Plant

Anchor Hocking Glass Corp., Lancaster, O., started early this month manufacturing operations at its new glass container plant in San Leandro, Calif. The plant houses all new equipment necessary for the operation of an automated 1959 type glass factory, according to Wm. V. Fisher, the firm's president. It is served by the Southern Pacific Railroad and by truck lines.

The twenty three acre tract on which the new facilities are located was secured by the firm in 1956. A modern steel and concrete warehouse was constructed on the site in 1958.

Anchor Hocking now has 16 plants, three of them operating on the West Coast: Maywood Glass Co., a subsidary in Los Angeles: Pacific Coast Closure Division at South Gate, and the new San Leandro plant, operated by Maywood.

In charge of all West Coast operations is Howard V. Fulton, vice-president and general manager of Maywood Glass Co., and a director of Anchor Hocking Glass Corp. R. H. Dallas, vice-president of Maywood is sales manager for the three West Coast plants, W. E. Boschin is factories manager of the West Coast glass operations. Plant managers are J. K. Carnahan-San Leandro; J. G. Callinan-Maywood Glass Co., Los Angeles; A. Podel-Pacific Coast Closure Division of Anchor Hocking at South Gate, California. Western sales offices are maintained by Anchor Hocking at Los Angeles, San Francisco, Fresno, Seattle, Phoenix and Salt Lake

New Can Imprinter

A new machine for imprinting data on lithographed cans in one operation was introduced recently by Charles Beck Machine Corp., King of Prussia, Pa. Called the Beck Can Imprinter, the machine is said to produce an imprint that matches the quality and style of the lithography on regular or aerosol cans. The unit handles containers of metal, plastic, or fibre, either filled or empty, and is reported to require only two settings to change the can size it accommodates. Completely self powered for production use, the imprinter is built on castors for mobility and takes up a floor space area of four by eight feet.

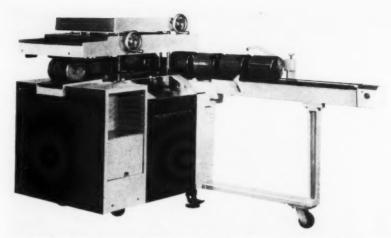
Knox Glass Sales Rise

Net sales of Knox Glass, Inc., Knox, Pa., for the nine months period ended June 30, 1959, were \$29,653,351, an increase of 12 per cent over record sales of \$26,571,250 reported for the corresponding period last year.

Net income during the period amounted to \$867,503, an increase of 27 per cent over the \$682,470 earned in the 1958 period.

Aluminum Can Program

A program by Continental Can Co., New York, which offers one-quart aluminum oil cans at the same price as steel cans, for large scale commercial tests by oil companies, has been extended through 1960, it was announced last month by Reuben L. Perin, executive vice-president of the metal division. The program began in May 1958 and was scheduled to expire last August. Twelve major refineries throughout the country have participated in the tests, Mr. Perin said, and industry shipments of oil cans are expected to reach an annual rate of 200 million units by the end of 1959. Advantages of the aluminum cans. according to Continental, are their light weight, greater resistance to corrosion than steel, easier opening and removal of the device used to



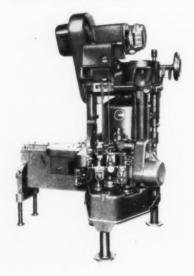
New can imprinter of Charles Beck Machine Corp., King of Prussia, Pa.

funnel the oil into the crankcase, and more convenient disposal of empty cans.

Owens Birthday Observed

Plaques commemorating the 100th anniversary of the birth of Michael J. Owens, inventor of the automatic bottle blowing machine, were hung almost simultaneously

New 450-HCM can closing machine announced recently by Continental Can Co., New York, embosses and closes one quart oil and anti-freeze cans at maximum speed of 600 cans per minute. Equipment included with standard machine, as determined by user's canning line requirements, consists of motor bracket (less motor, motor pulley and belt), heavy duty marker, basic filler drive, explosion proof electrical attachments, universal floor stand, 90° discharge with idler sprocket and atmospheric change parts for the 401" x 509" can. Auxiliary equipment is also available, and the machine's seaming mechanism and cover feed can be adjusted to handle cluminum cans.



early last month at 34 plants across the country of Owens-Illinois Glass Co., Toledo, O. The heads of three firms bearing the Owens name gathered at O-I's Libbey Glass division plant for a ceremony marking the event. Brief remarks were made by J. P. Levis, chairman of O-I; John D. Biggers, chairman, Libbey-Owens-Ford Glass Co.; and Harold Boeschenstein, president, Owens-Corning Fiberglas Corp.

The Owens machine is said to have revolutionized the glass industry at the turn of the century by permitting the production of bottles and jars of uniform dimensions and eliminating the handblowing method of production.

New Gottscho Imprinters

Four new imprinting machines for automatic coding of packages on the production line will be unveiled by Adolph Gottscho, Inc., Hillside, N. J., at the Packaging Machinery Manufacturers Institute show at the New York Coliseum, Nov. 17-20. Included are the "Model TMT Markocoder," "Series 450 Rolacoder," "Series 210 Rolacoder," and the "Model 790 Rolaprinter."

"Model TMT" is a high speed unit that imprints tops of cans, jars, and bottles at speeds of up to 1,000 units per minute. Reported to operate at normal line speed, the unit imprints deeply recessed surfaces, and compensates automatically for variations in height of the container or depth of recess.

The "Series 450 Rolacoder" is an attachment for roll-through labelling machines and imprints registered code-date on wraparound labels of cans and bottles. It operates at the same speed as the labeller.

Designed for coding the rear end of shipping cases as they travel along a conveyor or through a sealer, the "Series 210 Rolacoder" features compact design and low height for attachment to other machinery in a limited space.

A vertical flexographic printing unit is incorporated into the "Model 790 Rolaprinter" attachment which is designed for imprinting side surfaces of cartons, cases, cans, and crates. It is fully automatic and has built-in controls.

Other Gottscho package imprinting attachments also will be on display at the show.

New Colton Filling Line

A new aerosol filling line of straight line design for medium volume automatic production, an automatic machine for filling and heat-sealing polyethylene tubes, and a rotary unscrambler are among the new equipment to be exhibited by Arthur Colton Co., 3400 E. Lafayette, Detroit 7, at the Packaging Machinery Manufacturers Institute show to be held at the New York Coliseum, Nov. 17-20.

The aerosol filling production line will handle up to 30 containers per minute and includes a variable speed drive; a double-ported, two-nozzle filler, Colton-Hope model 15MS; a single head crimper; and a single-head pressure filler said to enable the container pressurizing operation to be carried out without refrigeration. The line is reported to fill containers with liquids and light viscous materials and is designed to permit low-cost changeover from one container to another.

The polyethylene tube sealing and coding conversion unit to

Package Machinery Makers Elect Hollidge

N EW officers and directors of Packaging Machinery Manufacturers Institute, Inc., national



Kenneth B. Hollidge

association of packaging machinery manufacturers which was founded in 1933, were elected at the organization's 27th annual meeting, held at the Equinox House, Manchester, Vt., Sept. 16-19.

The following officers were elected at the meeting for two year terms to begin on January 1, 1960: President, Kenneth B. Hollidge, executive vice-president, Arthur Colton Co., Detroit; first vice-president

dent, W. R. Huguenin, division manager, Food Machinery Manufacturing Co. Packaging Machinery Division, Philadelphia; second vice-president, Harold Mosedale, Jr., vice president of engineering, Package Machinery Co., East Longmeadow, Mass.; and third vice-president, William W. Anthony, Jr., vice-president and executive general manager, Crompton and Knowles Packaging Corp., Holyoke, Mass.

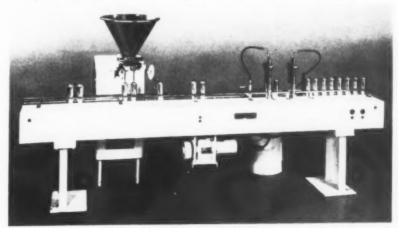
The following were elected to three-year terms as directors of PMM1 to begin service on January 1, 1960: Arthur E. Motch, vice-president, R. A. Jones & Co., Cincinnati; J. H. Brezinski, president, Roto Bag Machinery Corp., New York, and Gene Lakso, vice-president sales, The Lakso Co., Fitchburg, Mass.

In his capacity as third vicepresident, William W. Anthony will serve as chairman for the forthcoming Packaging Machinery Manufacturers Institute Show of 1961 which will be held in the new convention hall in Detroit, Oct. 31 through Nov. 3, 1961. The 1959 show is being held in New York, Nov. 17-20.

be on display has been designated model 176 and can be installed on standard model 17 or 175 fillers. It fits on the machine in place of the original folding and crimping heads for the metal tubes and allows for one filler to handle either metal or plastic tube filling operations.

(Turn to Page 153)

New straight line aerosol filling unit of Arthur Colton Co., Detroit



WRAPAK

WRAPAK is a modest packaging investment that pays immediate dividends to the manufacturer, the distributor and the retailer in many product lines.

Dividend to the manufacturer: WRAPAK automatic packaging machinery wraps filled containers (cans, cartons or bottles—glass, metal and plastic) of your product with WRAPAK cartons at the high speeds demanded by today's production schedules. In many applications, the WRAPAK system uses substantially less material than is used in conventional partitions and master packers.

Dividend to the distributor: WRAPAK cartons save time in handling and price marking—time and material in reshipment of less than case lots to retail customers.

Dividend to the retailer: WRAPAK makes retail stocking, price marking, and selling easier, more efficient and less costly.

Container Corporation has combined the best qualities of packaging structure, machinery and visual design into the WRAPAK system...Let this unique system help make the distribution of your product a more profitable operation—all the way. Write or call for further information.



CONTAINER CORPORATION OF AMERICA

Valley Forge Marketing Center • 5000 Flat Rock Road • Philadelphia 27, Pennsylvania



What's New?

Display package, right, consisting of two aerosol cans of "Pine-Sol" room deodorant in spice or pine fragrance, plus a "hide-a-spray" plastic dispenser (shown in center foreground), is being offered nationally as fall promotion by Dumas Milner Corp., Jackson, Miss. Three-unit pack retails for \$1.58, which is price of two cans of product. Dispensers are available in white and pastel shades of pink, blue, green and yellow. Back of display package appears in upper left. Deodorant is loaded in Crown "Spra-tainers" by Aerosol Corp. of the South, Memphis.

New package design adopted for all three of its powdered products was announced late lost month by Savogran Co., Norwood, Mass. Repackaged are "Dirtex" wall, floor and woodwork cleaner, "Level-Best" spackling compound, and "Crack Filler" water putty Packages are designed for greater convenience of both retailers and consumer and combine ease of handling, storing displey and carrying. Final design was result of a joint effort by Savogran, its advertising agency, Harold Cabot & Co, and the manufacturer of the package

Newest addition to line of Chanel, New York, is "No. 5" spray perfume-spray cologne set. Larger unit contains 800 measured sprays of cologne, and smaller matching, black and gold case contains an estimated 225 sprays of perfume. Set retails for \$10, plus tax Metered valves are by VCA, Inc., Bridgeport. Scoville Mig. Co., Waterbury, Conn., supplies caps and bodies of cases which are polished black anodized aluminum. Bottles are from Cart-Lowery, Baltimore, and Powr-Pak-ConnChem, Inc., Bridgeport is loader.

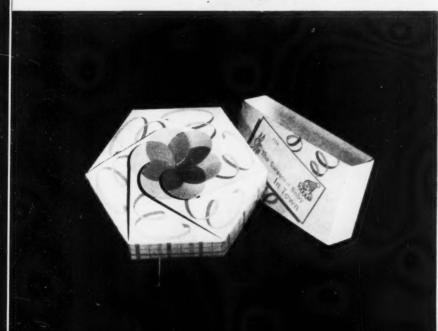












"Vi-Derm" medicated hand soap introduced recently by Arthrins, Inc., Mount Vernon, N. Y., is described as an "all purpose soap... for sensitive skin." Three and one-half ounce bar, right, retails for 60 cents; three bars are \$1.50. Hypo-allergenic and antipuritic, the soap is designed for use in "any eczemateous condition." The active ingredient is listed as extract of amaryllis. Sample bar at left is distributed in cellophone sleeve supplied by National Transparent Manufacturing Co., New York, John T. Stanley Co., New York, makes the soap for Arthrins, Inc.

Stephan Cosmetic Corp., St. Louis, is now packaging its shampoo and dandruff remover hair lotion in glass bottles made by Hazel-Atlas Glass Co., Wheeling, W. Va., Division of Continental Can Co., New York. The shampoo is packed in three sizes: a half-pint curved bottle (right); one-pint round bottle; and one gallon jug. All three have white plastic caps and white ceramic labels. Lotion (at left) is in squared bottle with aluminum cap from Aluminum Co. of America, Pittsburgh.

Castile baby soap is latest addition to baby product line of Stanley Home Products, Inc., Easthampton, Mass. Three cakes ot soap are packed in a six-sided carton with a special slip-on sleeve reading "For.... The Sweetest Baby in Town." Carton is made by Boxmakers, Inc., West Springfield, Mass. Package retails for \$1.29. A feature of soap is its curved design so that only edges touch soap dish.

FACING PAGE

Prince Matchabelli, Inc., New York, has just introduced its first metered aerosol cologne in two scents, "Stradivari," (shown), and "Wind Song." They are packaged in "Vaniti-Mist" outer container made by Risdon Manufacturing Co., Naugatuck, Conn., supplier of the valve and actuator. The removable glass inner container is from T. C. Wheaton Co., Millville, N. J., and the package is filled by Aero-Chem Fillers, Inc., Bridgeport, Conn.

"3-D" auto polish and whitewall tire cleaner from Associated Engineering Chemistry, Inc., Fort Lauderdale, Fla., is being packaged in 22-ounce plastic containers from Bradley Container Corp., Maynard, Mass., subsidiary of American Can Co., New York Bradley also makes the caps and prints the container. A silicone type product, auto polish retails for \$2.50. Tire cleaner sells for \$1.25.

New "Creamee" hand cleaner was recently introduced by Roytype, a department of Royal McBee Corp., Port Chester, N. Y. Cleaner is designed for office workers and is intended to remove carbon smudge and duplicating and printing inks without water. "Creamee" is sold through all Royal McBee branch offices and Roytype dealers. Suggested retail price is \$12 per dozen.

Selig Co., Atlanta, Ga., now has a new car and truck wash called "Poliwash" packaged in a one gallon glass jug. A liquid detergent, the product is used by diluting four ounces of it with one gallon of water Claimed to require no rubbing, polishing, or buffing, "Poliwash" is reported not to streak



















Aerosol Perfumes



are on the move!

Sales up 518% in 1958 over 1955!

Reason: the magic touch of aerosol packaging makes perfumes and colognes easier to apply...eliminates loss from evaporation, spillage, leakage and breakage.

Aerosol perfumes and colognes are moving fast! Last year, sales shot up to 28 million units—a 518% increase over the 5.4 million units sold as recently as 1955.* And the trend has just begun. The push-button convenience of modern pressure packaged perfumes and colognes . . . the elimination of loss from evaporation, spillage, and breakage . . . have proved tremendous sales advantages. An aerosol perfume won't leak. Every woman can now safely carry perfume in her purse . . . have it with her wherever she goes.

If you're interested in aerosol perfumes and colognes, follow the course of so many successful aerosol marketers—take advantage of the special services General Chemical puts at your disposal.

How General Chemical can help you

As one of America's leading producers of aerosol propellants, General Chemical can give you valuable technical information which will help you determine the proper aerosol propellant compatible with your perfume or cologne. We

will supply you with the latest aerosol market information. We can show you promising new types of aerosol formulations developed in our laboratories. And we can give you information on how contract fillers can help you, from test marketing right through to full commercial production. The fact is, through the use of contract fillers you can get into aerosols quickly and efficiently—without any outlay on your part for plant, special equipment or personnel!

Why not take advantage of these valuable services from General Chemical now? Call or write us today for a confidential discussion of your requirements.

*Estimated by Market Surveys Department, General Chemical Division, Allied Chemical Corporation

genetron aerosol propellants

Putting the "push" in America's finest aerosols

Basic to America's Progress



GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N.Y.

The answers to aerosol valve needs are being developed and perfected daily at Precision . . .

THIS MEANS ADDITIONAL PRODUCT SALES FOR YOU!



slanted finger rest has an imprinted arrow in a second color to show the direction



A Precision stream spout for dispensing any product, regardless of viscousity, that will pour. Currently most toothpaste and syrup manufacturers, are using this practical and attractive unit.



spouts and in addition is far easier to keep clean, Just lift and hold under the faucet.



This graceful spout has proven to be a profitable way of dispensing pharmaceuticals and cosmetics. Combined with Precisions metering valve, it dispenses a pre-determined amount with a touch.

 At Precision there is a continuing program of research and development, for each day brings new products to be packaged in aerosol containers. The success of aerosols, is based on functional design and attractive appearance for these two go hand in hand to improve dispensing and increase sales.

Perhaps your product, whether it be dispensed as a foam, a spray, a drop or a stream, should be adapted to an aerosol package. Aerosols have proven, an increase in sales because of appearance, economy and simplicity of use. Precision engineers will be most happy to talk with you.



PRECISION VALVE CORPORATION, 700 NEPPERHAN AVENUE, YONKERS, N. Y.

NEW Erade Marks

THE following trade marks were published in recent issues of the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

ScienSure -- This for flexible film finishes, self-polishing floor com-positions and self-polishing floor com-positions having bactericidal properties. Filed Dec. 16, 1958 by Associated Just Distributors, Inc., Baltimore. Claims use since Mar. 15, 1957.

Zepolish-This for polishes for wood, metal, and painted surfaces. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta. Claims use since March 1955. F & B — This for insecticides,

f & B—This for insecticides, fungicides, miticides, herbicides, chemicals for dust-proofing and ice control, drainpipe cleaner-cess pool solvent, and crab grass killer. Filed July 5, 1957 by Faesy & Besthoff, Inc., New York. Claims use since 1950.

Bio-Guard — This for hatchery determent having and discovered the control of the contro

detergent having germicidal and dis-infectant properties. Filed Sept. 9, 1958 by Bio-Lab, Inc., Decatur, Ga. Claims use since Aug. 8, 1958. In 'N Out—This for detergent

for cleaning farm and dairy equipment and also for use in the home. Filed Nov. 19, 1958 by Anderson Chemical Co., Litchfield, Minn. Claims use since Oct. 23, 1958.

Royaltone—This for detergent

Royaltone—This for detergent preparation for cleaning automotive vehicles. Filed Jan. 5, 1958 by Royal-tone Products Corp., Brooklyn, N. Y. Claims use since Apr. 18, 1958. Kathryn Beich—This for liquid detergent. Filed Feb. 19, 1959 by Paul F. Beich Co., Bloomington, Ill. Claims

r. beich Co., Bioomington, Ill. Claims use since Jan. 21, 1959.

Lan O Kleen Plus — This for powdered hand cleaner. Filed Feb. 24, 1959 by West Chemical Products, Inc., Long Island City, N.Y. Claims use since Jan. 5, 1959.

Sparex—This for cleaning compound. Filed Mar. 18, 1959 by Quimby & Co., Chester, N.J. Claims use since Jan. 8, 1951.

Reflection—This for polish for autos and for metal surfaces. Filed Mar. 25, 1959 by International Metal Polish Co., Indianapolis, Ind. Claims use since Nov. 18, 1958. Columbia R—This for floor wax.

Filed April 3, 1959 by Columbia Wax Co., Glendale, Calif. Claims use since Aug. 31, 1950 and since Aug. 29, 1950 as to "Columbia."

Columbia RR - This for floor wax. Filed April 3, 1959 by Columbia Wax Co., Glendale, Calif. Claims use since Mar. 27, 1951, and since Aug. 29, 1950 as to "Columbia."

Coat-Alum - This for cleanerpolish for articles of aluminum such as storm doors, storm windows, and chrome copper. Filed April 14, 1959 by Coat-Alum, Garfield, N.J. Claims use since Oct. 1, 1958.

Jon-E-Blu—This for toilet bowl cleaner and deodorizer. Filed May 12, 1958 by Colvin-Templeton, Inc., Oak-land, Calif. Claims use since April

8, 1958.

8, 1958.

Satellite—This for detergents for household and industrial uses. Filed May 27, 1958 by Albert K. Drake, doing business as Drake Industries, Summit, N.J. Claims use since May 15, 1958. 3-D—This for tire cleaner. Filed

July 14, 1958 by Associated Engineering Chemistry, Inc., Fort Lauderdale, Fla. Claims use since Sept. 3, 1957.

Nox Soil — This for paint and fabric cleaner and a glass cleaner and polisher. Filed Aug. 6, 1958 by Howard Nox Soil Products. Sagramento. ard Nox Soil Products, Sacramento, Calif. Claims use since June 28, 1958 on paint and fabric cleaner.

DO-16-This for detergents and bluing for laundry use. Filed Nov. 3, 1958 by Laurdercenter Corp., Woodside, N.Y. Claims use since Oct. 23, 1958.

ScienSure-This for detergent compositions having disinfecting properties for general cleaning purposes, wax strippers, and sweeping com-pounds. Filed Dec. 16, 1958 by As-sociated Just Distributors, Inc., Balti-more. Claims use since Mar. 15, 1957.

Dynalon—This for commercial liquid cleaner. Filed Feb. 2, 1959 by Welders Supply of Worcester, Inc., doing business as Dynalon Products, Worcester, Mass. Claims use since Jan. 19, 1959.

Lustranol - This for dairy cleaners and cleanser for general purposes. Filed Feb. 13, 1959 by Minnesota Chemical Co., St. Paul, Minn. Claims use since Aug. 25, 1938.

Purposol—This for liquid de-

tergents, Filed Mar. 9, 1959 by Los Angeles Soap Co., Los Angeles. Claims use since Nov. 25, 1958..

Tradewell-This for soaps, detergents, and cleaning preparations for household use. Filed Mar. 9, 1959 by Tradewell Stores, Inc., Seattle, Wash. Claims use since Mar. 15, 1957. Seattle.

PR Brand-This for liquid detergent. Filed Mar. 10, 1959 by Peter Reeves Markets, Inc., Bronx, N. Y. Claims use since Feb. 1, 1942.

Rol-Cream-This for waterless Williamette Sales Co., doing business as Hand Cleaner Co., Portland, Ore. Claims use since Feb. 1, 1959.

Powerfoam-This for cleaning composition in liquid and powder form for cleaning rugs and all color fast fabrics. Filed April 6, 1959 by A. Arthur Jaffe, doirg business as Powerfoam Co., Scranton, Pa. Claims use since Oct. 5, 1954.

Spring Scent—This for house-hold cleaner. Filed May 13, 1959 by Texize Chemicals, Inc., Greenville, S. C. Claims use since April 30, 1959.

Cadie Dry Magic Cloth—This for chemically treated cleaning and polishing cloth that contains polishing material. Filed July 22, 1957 by Cadie Chemical Products, Inc., New York. Claims use since Jan. 15, 1957. Super Westwax—This for pol-

ishing wax and combination coating

ishing wax and combination coating and polishing wax. Filed Feb. 27, 1959 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since Jan. 2, 1953.

Johnston's No-Flys — This for insecticides. Filed June 14, 1954 by Gaston Johnston Corp., Long Island City, N. Y. Claims use since Mar. 1, 1954 and since January 1, 1946 as to "Johnston's." "Johnston's

"Johnston's."

A-to-Z.—This for deodorants for industrial use. Filed May 20, 1958 by Dodge & Olcott, Inc., New York. Claims use since April 28, 1958.

Gard-All—This for liquid insecticide. Filed Dec. 4, 1958 by J. & L. Adikes, Inc., Jamaica, N. Y. Claims use since Nov. 12, 1958.

Zep-O-Kill — This for insecticide. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1954.

Zeposector—This for insecti-

Zeposector—This for insecticide. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1957.

Zep-O-Mint—This for disinfec-

tant having incidental germicidal, bactericidal, and deodorizing properties. Filed Dec. 31, 1958 by Zep Manufac-turing Corp., Atlanta, Ga. Claims use since March 1952.

Zepopine 8-This for disinfectant. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1950.

use since March 1950.

Zep-O-Fresh — This for room deodorant and air freshener. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1955.

Zep-Amine-This for disinfectant, sanitizing, and deodorant prepar-

tant, sanitizing, and deodorant preparation. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1948.

Zep-I-Dine 20. This for sanitizing and germicidal rinse. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1958. 1958.

Red Bird—This for antifreeze. Filed Mar. 18, 1959 by Monsanto Chemical Co., St. Louis, Mo. Claims use since at least September 1957.

Zepofoam-This for carpet upholstery cleaning preparation. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1949.

General Mills Chemicals

Commercial availability of 24 new fatty nitrogen chemicals including two quaternized fatty diamines tradenamed "Aliquats," was announced last month by the chemicals division of General Mills in Kankakee, Ill. Key properties of the chemicals, according to the company, are their surface activity and anti-static activity. They have application in detergents, bactericides, emulsifiers, water treatment, and corrosion inhibition.



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These colorful and sturdy Owens-Illinois pressure packages come in a variety of shapes and sizes. Choose from a wealth of stock containers, or let O-I create a new design just for you.

Every O-I container can be permanently decorated with Applied Color Lettering.

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AN (1) PRODUCT

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PRESSURE PACKAGING

Miss Moore Joins ATI

Fay Mowery Moore has joined Aerosol Techniques, Inc., Bridgeport, Conn., as a design con-



F. M. Moore

sultant, it was announced last month by H. R. Shepherd, president. As a designer and artist she will be available for consultation with marketer customers of ATI

on the development of package designs and related ideas. Her appointment is believed by the Bridgeport contract aerosol loader to be the first of such a specialist by an aerosol packaging firm. Miss Moore is known here and abroad as an artist, designer, sculptor, and display designer. She was formerly with Bonwit Teller, New York department store.

New Continental Plant

Continental Can Co., New York, recently announced plans to build a 250,000 square foot can plant and warehouse in Shoreham. Mich., a suburb of St. Joseph. According to Reuben L. Perin, executive vice-president of the metal division, the plant will be equipped to produce 250 millions cans a year on a two-shift basis, with a work force of about 90 people. It is designed for expansion to nearly double that capacity.

Fuller Features Aerosols

A number of chemical specialty aerosol products were featured in a recent issue of "The Fuller Brush Magazine" which is distributed to consumers by local Fuller Brush dealers. Among the many Fuller products now packaged in aerosol containers are hand

cream, deodorants, athlete's foot spray, shampoo, shave cream, sachets, spot remover, rug shampoo, moth proofer, duster spray, and room deodorizer. Besides these products, which appear throughout the magazine, a special page is devoted to specialty aerosol items, including paint, insecticides, oil, garbage can deodorizers, and pet shampoo.

New Amco Crimping Unit

A hand-lever operated crimping machine for aerosol containers was introduced recently by Aerosol Machinery Co., Westbury, N. Y. Said to be useful in small lot production as well as laboratory work, the machine has a short single stroke lever system which: affords multiplied leverage. It is called the "Amco Hand Crimper" and weighs 35 pounds. According to the company, it is possible to double the production of comparable hand operated machines

"Rezifilm," a new surgical spray dressing for pre- and post-operative use in preventing wound infections, was recently developed by E. R. Squibb & Sons, division of Olin Mathieson Chemical Corp., New York. It is filled by Fluid Chemical Co., Newark, N. J., in two ounce aerosol containers from Peerless Tube Co., Bloomfield, N. J. Valves are from Precision Valve Corp., Yonkers, N. Y., and the caps are supplied by Plastic Molded Arts Corp., Long Island City, N. Y.



through use of the new crimper. Complete information may be obtained from Milton H. Feig, general manager, 80 Magnolia Ave., Westbury, N. Y.



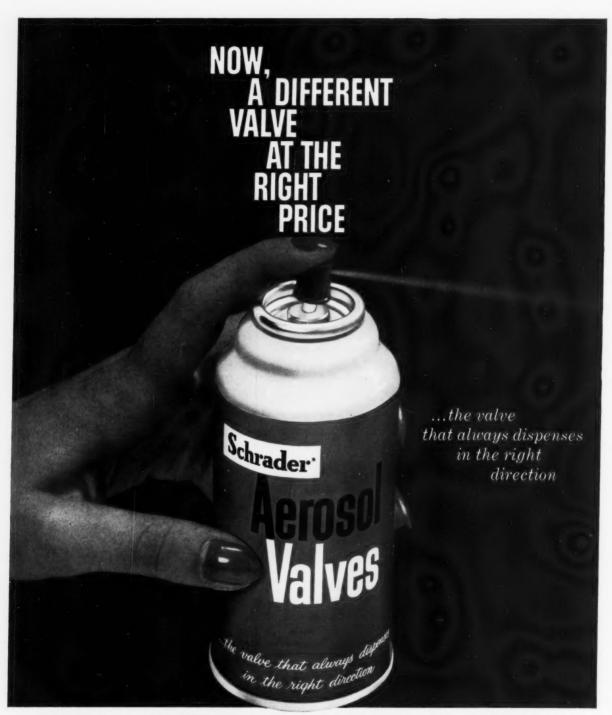
Cosmetic Pressure Packs

Nitrogen pressurized packaging of cosmetic specialties is one of the subjects receiving attention in the July/August issue of Chemmuniqué, external house organ of Atlas Powder Co.'s Chemicals Division, Wilmington, Del. Atlas is vitally interested in this field as a manufacturer of a wide range of non-ionic emulsifiers. The firm is carrying out work on problems connected with emulsion stability and viscosity regulation for creams intended for pressure dispensing. It is also running corrosion tests on cosmetic formulations in tinplate nitrogen pressurized containers. Some basic formulations and background information on pressure packaging with nitrogen are available as Cosmetic Bulletin LD-83.

PMC Modifies Sealer

PMC Industries, Hackensack, N. J., recently announced an improved method for applying metal aerosol valves to glass containers through a modification of its model RS-1800 high speed sealer, a multi-spindle rotary machine for attaching metal seals to pharmaceutical vials. The company reports that a smooth, wrinkle-free

(Turn to Page 150)



FROM A DEPENDABLE SOURCE OF SUPPLY



Aerosol Valves

A. SCHRADER'S SON

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Division of Scavill Manufacturing Company, Inc.
470 Vanderbilt Ave., Brooklyn 38, N.Y.



"Knox gives us on-time delivery, quality glass," says Vice President of leading detergent firm

"Our total sales have increased more than 35,000% in the past five years," says the Vice President of one of the nation's foremost manufacturer's of all-purpose liquid detergents.*

"In addition to a fine new product and a good advertising program, cooperative and able suppliers—like Knox Glass—have played an important part in our success.

"Fifteen years ago, when we first started doing business with Knox, we used very little glass. Today, with our "Name available on request.

capacity at 60,000 cases a day, Knox is still our major glass container supplier.

"We use Knox because they have always given us a top quality product and because they consistently deliver both pint and quart bottles on time—at the plant when we need them."

Find out how Knox quality and delivery can add value to your packaging operation. Contact Knox Glass, Inc., Knox, Pennsylvania.

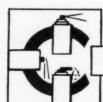
the new/knox glass





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CONTINENTAL FILLING CORPORATION

Danville, Illinois

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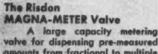
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THE WIDEST RANGE OF PRESSURIZED PRODUCTS



Valves



valve for dispensing pre-measured amounts from fractional to multiple cc quantities in spray, liquid or foam form.





The Risdon METERED SPRAY Valve

Delivers a pre-measured spray of duration determined by packager. Actuator must be released and pressed again for subsequent measured spray.



A non-metallic valve for glass, plastic and small metal containers. No spring. No metal in contact with contents. No danger of corrosion or contamination.





The Risdon 5210 Valve

For metal containers. One basic valve — five models with special actuator to suit specific function. Suitable for both refrigeration and pressure filling.



Any Risdon valve becomes a "Micro-Mist" valve when fitted with Risdon's patented Micro-Mist mechanical break-up actuator. Enables valve to dispense 3-phase products or give super-spray performance on 2-phase and ultra-low pressure products. Increases formulation latitude and economy.





Dispense an extensive variety of formulations including propellant emulsions or dispersions • certain types of powders • water-base products • 2-phase, 3-phase & ultra-low pressure products.

- Dispense products in spray, liquid or foam form.
- Applied to glass, plastic and metal containers.
- Dispense pre-measured dosages or unmeasured amounts.
- Available with special applicatoractuators to suit the product.

Contact Risdon for further informa-

tion, samples and prices.

Valves shown are covered by Patents or Patents Pend.



THE RISDON
MANUFACTURING COMPANY

Aerosol Division

Naugatuck, Conn.

RI-114

Risdon valves can be fitted with special actuator-applicators such as shown



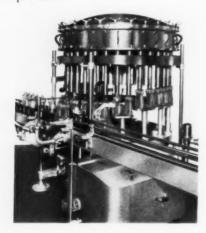
finish is produced on the metal valve, even when operating at speeds in excess of 200 units per minute. Companion equipment is available for applying the dip tube to the valve and for placing the valve assembly onto the bottle prior to sealing.

Horix Pressure Filler

A new pressure filler for aerosol containers has been developed by Horix Manufacturing Co., Pittsburgh. The new filler will be on display at the Horix booth (No. 111) during the Packaging Machinery Manufacturers Institute Show in New York, Nov. 17-20.

The pressure medium for the new filler can be air, nitrogen, carbon dioxide or other appropriate gas. With the same valve equipment the machine can be used as a pressure, gravity or gravity vacuum filler. Thus, according to Horix, the machine has a versatility which enables it to handle aqueous and heavier products with equal efficiency, filling them in a wide range of containers including those of plastic, glass or tin.

The new pressure filler will be operated continuously during the show, discharging containers to the infeed of a Horix "walkingbeam" cooling unit. The action of the walking beam deck moves evenly spaced containers through the cooler and across the line roller discharge for automatic return to the filler. Horix walking beams are built as coolers, pasteurizers, cookers and for combinations of these processes.



Program for Aerosol Clinics Oct. 17 and 24

THE final program for the technical aerosol clinics to be held in New York on Oct. 17th and in Chicago on Oct. 24th was recently announced by the Chemical Specialties Manufacturers Association. The Aerosol Division of CSMA is sponsoring the clinics which are designed to provide basic and up-to-date technical information on all phases of pressure packaging for representatives of companies interested in this method of packaging.

Both clinics will run from 9 a.m. to 5 p.m. with the New York session to be held in the Sheraton-McAlpin Hotel and the Chicago clinic at the LaSalle Hotel.

E. J. McKernan of E. J. Mc-Kernan Co., Elgin, Ill., and chairman of the Aerosol Division, will be the introductory speaker. Others scheduled to speak and their topics include: R. A. Crane, "Freon" products division, Du Pont Co., Wilmington, Del., "Aerosol Industry History and Markets;" F. A. Mina, Lodes Aerosol Consultants, Inc., New York, "Aerosol Principles;" L. T. Flanner, General Chemical Division, Allied Chemical Corp., New York, "Aerosol Propellants;" J. J. Buchanan, Continental Can Co., Chicago, "Aerosol Containers;" W. C. Beard, Jr., Risdon Manufacturing Co., Naugatuck, Conn., "Aerosol Valves;" and D. C. Geary, Union Carbide Chemicals Co., New York, "Aerosol Laboratory Operations.'

The remainder of the program is divided into three panel groups: formulation problems; handling customer complaints; and commercial filling methods and problems.

On the first panel are P. M. Prussak, Associated Brands, Inc., Brooklyn, N. Y.; F. Presant, Aerosol Techniques, Inc., Bridgeport, Conn.; M. Fowks, Powr-Pak, Inc., Bridgeport; M. A. Johnsen, Peterson Filling and Packaging Co., Danville, Ill.; R. L. Rhodes, Real-Kill Co., division of Cook Chemi-

cal Co., Kansas City, Mo.; S. J. Campbell, Continental Filling Corp., Danville, Ill.; and D. Tillotson, Pennsalt Chemicals Corp., Philadelphia. J. H. Beacher of Avon Products, Inc., Suffern, N. Y., is on the panel dealing with the handling of customer complaints.

Members of the commercial filling methods and problems panel are J. C. Hart, Sr., J. C. Stalfort & Sons, Inc., Baltimore; A. Iannacone, Fluid Chemical Co., Newark, N. J.; A. Osman, Thomasson of Pennsylvania, Inc., Norristown; C. F. Kessler, Plasti-Kote, Inc., Cleveland; R. T. Ferry, Kartridg-Pak Machine Co., Franklin Park, Ill.; and R. G. Appenzeller, G. Barr & Co., Chicago.

It was erroncously reported in *Soap and Chemical Specialties* last month that the registration fee was \$12. Advance registration fee is \$10 and registration at the door is \$12. Besides attendance at the clinics the fee covers luncheon and two coffee breaks.

Chairman of the aerosol clinic subcommittee is A. H. Lawrence, Jr., "Freon" Products division, E. I. du Pont de Nemours & Co., Wilmington, Del., and program chairman is Joseph J. Tomlinson, General Chemical Division, Allied Chemical Corp., New York. Other committee members are: G. Barr, G. Barr & Co., Chicago; J. J. Buchanan, Continental Can Co., Chicago; J. Froot, McLaughlin, Gormley King Co., Minneapolis: W. E. Graham, Clayton Corp., St. Louis, H. W. Hamilton, CSMA: E. E. Husted, Union Carbide Chemicals Corp., New York; and E. J. McKernan, E. J. McKernan Co., Elgin, III.

Carter Pays Dividend

Carter Products, Inc., New York, paid a regular quarterly dividend of 25 cents per share for the second quarter on Sept. 30 to stockholders of record on Sept. 25. The dividend was declared by the board of directors last month.

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Exclusive, specially designed equipment for fast production of all metered dispensers

RESEARCH to develop the right product QUALITY CONTROL to make the package market

PRODUCTION to handle small and large volume of all type Aerosol products

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INDUSTRIAL PRODUCTS including

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GARD now offers the most complete, most modern filling facilities in the industry for all aerosols from food to paint. Minimum production runs — as low as 1,000 cans to 1,000,000 and up! Air-conditioned, humidity controlled throughout GARD INDUSTRIES, INC. Northfield, Illinois

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Reduce your packaging cost by letting us package for you. We also warehouse and ship.

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or our specialists will help compound, package or label aerosols, toiletries, tablets, liquids, food products, etc.

70 years' experience. Quality controls. For details with no obligation, write or call

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Insecticides, Deodorants, Tooth Paste,
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Colognes, Plastic Sprays, etc.

Experts in formulation and development estrict quality control • ample storage • pressure and "COLD FILL" lines • samples and
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FILLS ALL PRODUCTS WESTERN FILLING CORPORATION 6423 BANDINI BLVD., LOS ANGELES

Aerosol Housewares Supermart Promotion

PROMOTION of pressure A packaged products will be sponsored in a chain of three northern New Jersey hardware-housewares supermarts Oct. 22-25 by the Aerosol Division of the Chemical Specialties Manufacturers Association. The supermarts, Rickel Brothers' do-it-yourself stores, are located in Succasunna (near Dover), Paramus and Union.

Purpose of the promotion is to educate consumers to the con-

venience and variety of aerosol products, and to provide a case history which will be helpful to retailers, not only in the housewareshardware field, but also in others sach as drug, cosmetic and food retailing.

The four-day "Aerosol Fair" will run Thursday through Sunday. It will feature a demonstrator showing proper use of a wide range of houseware and do-it-yourself aerosol products carried by the stores.

A massed display of aerosols hung from the ceiling will invite customers to "guess how many." A portable television set will be given to the individual who first guesses the correct number, or comes closest, during the four-day special promotion. Although the demonstration will be put on only in the Succasunna store, a contest will be conducted in each of the three stores, with a grand prize being awarded in each on Sunday after-

Rickel customers will be interviewed to determine their attitude toward aerosol push-button packaging, and results of this consumer opinion poll will be made available to aerosol marketers.

The aerosol promotion will be featured in Rickel's full-page advertisments in eleven New Jersey newspapers on the Wednesday preceding the Fair, and for a full week in hourly spots on three local stations.

Kartridg-Pak Aerosol Line

Kartridg-Pak Co., 9151 W. Fullerton, Franklin Park, Ill., formerly Mojonnier Associates division, will introduce a new semi-automatic aerosol packaging line at the Packaging Machinery Manufacturers Institute show at the New York Coliseum, Nov. 17-20. Called KP-1000, the line is reported to be a self contained unit capable of filling up to 600 containers per hour. It includes a piston filler, a vacuum crimper, and a pressure filler. Priced in the \$6-\$7,000 range, the line is designed for the small volume manufacturer or processor and is expected to be used both

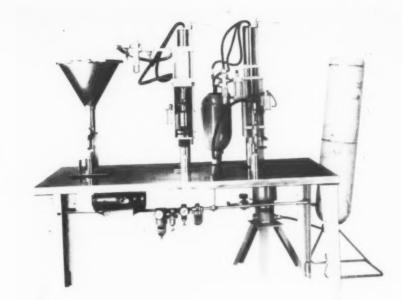


as a regular production line by the medium-sized processor and as an auxiliary line for pilot runs by a large-volume filler.

New Schrader Valve

A. Schrader's Son, 470 Vanderbilt Ave., Brooklyn, N. Y., recently introduced a new, toggle action valve for aerosol containers. The valve features a special button design 'which, if pushed or tilted in the indicated place, allows the valve to dispense only straight ahead, away from the user and in the direction the finger is pointing. the company reports. Interior orifice at the point of the valve stem can range from .010 to .030 and the button orifice from .030 to .040, in order that the single valve design can handle as wide a range of viscosities and spray patterns as possible

An additional restriction can be imposed by the spring cup to which the dip tube is attached since this opening can range from .062 down to .020. Schrader's manufactures all components of the valve except the dip tube. The mounting cup is made of tin plate with a double epoxy-plastic coat and the valve stem is made of "Zytel" nylon. The valve also features a stainless steel wire spring, neoprene gasket, and a button of "Alathon" 10 polyethylene.



New Kartridg-Pak semi-automatic derosol filling line.

New Filling Line

(From Page 135)

Operating in conjunction with a filling machine or other equipment, the rotary unscrambler features a case dump table, a 36-inch rotary disk, guide rail, and automatic feed to the in-feed conveyor.

Other equipment on display at the Colton booth are a liquid filler, a six-line filling machine, a rotary vacuum crimper, and a rotary pressure filler.

Maxwell in Aerosol Post

Hugh M. Maxwell has been advanced to the newly created position of assistant manager, aerosol sales for Virginia Smelting Co., West Norfolk, Va. Mr. Maxwell joined the company's aerosol department in 1958 as New York sales representative and now makes his headquarters in West Norfolk. He is succeeded in the New York area by James H. Hoskins, southeastern representative. The appointment of Mr. Maxwell marks the begining of an expansion program in the industrial aerosol field.





New toggle action valve for aerosol containers just announced by A. Schrader's Son, Brooklyn, features special button design. If pushed or tilted in indicated place, valve dispenses only straight ahead.

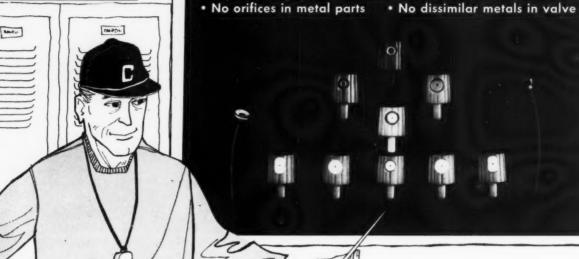


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INTRODUCED NEARLY TWO YEARS AGO, Newman-Green's mechanical break-up spray tip is working very successfully with hair lacquers, colognes, personal products, window cleaners, and a variety of other low-pressure formula-

NEWMAN-GREEN PAINT VALVES are designed to clean easier, eliminate clog-ging due to build-up of paint particles, and give a pattern that is consistent and uniform. More and more manufacturers are using Newman-Green valves every

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The built-in quality available only in Newman-Green aerosol valves includes.

- · No small orifices drilled in metal parts.
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- · Spray patterns can be varied completely in seconds by changing only spray head.
- · All metering orifices and spray heads are easily accessible for cleaning.

In addition, the extra-plus you get from Newman-Green's two-tone spray tips (designed to blend or contrast with your label design) is at no extra cost. Such color

contrasting assures quick, positive location of orifice opening and easier use of your aerosol package.

The Newman-Green valve design with built-in quality helps you cut production costs, assures better dispensing of your product with a more uniform pattern. Models are available for all types of metal or glass containers.

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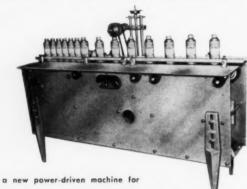
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Production...

EQUIPMENT · MATERIALS · PROCESSING

"Package Engineering"

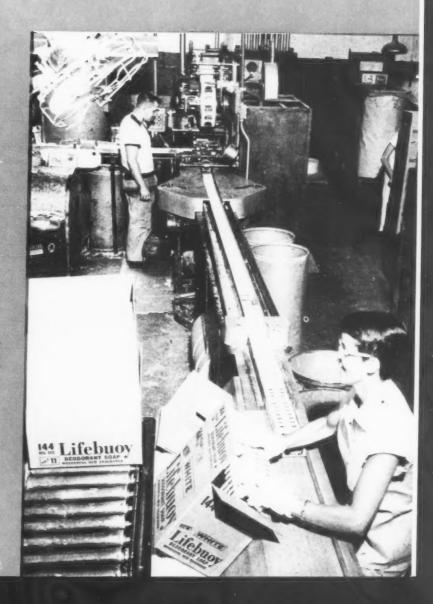
Book Reviews

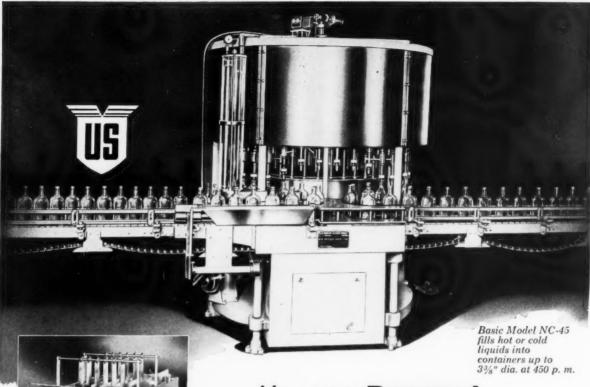
New Patents

Soap Plant Observer

Bulletins & Equipment

Final step in the production of new white "Lifebuoy" soap at Hammond. Ind., plant of Lever Brothers Co.. New York. Soap streams from wrapper to cartoning station. From here it goes to warehouse or is shipped to marketers throughout the U.S. National distribution of new version of "Lifebuoy" began last month. New odor added, too.





You can **Depend**upon **47 Years** of Liquid Filling **Engineering**

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MORE PRACTICAL to feed a packaging line automatically than by hand. The U.S. Container Feeder feeds containers to conveyor faster, easier, at a steadier pace and a lot cheaper. "Just dump'em on." In a few months your feeder has paid for itself and your saving is permanent! Write for a "Container Feeder Bulletin" today.

SHOPPING "BY CHOICE" AT TODAY'S RETAIL LEVEL makes clean containers mandatory. Consider how small the cost once a Sanitair (automatic air bottle cleaner) is synchronized into your production line. Write for a "Sanitair Bulletin."

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MODEL B-49 STRAIGHT-LINE VACUUM FILLER. Adjustable for miniature to gallon size containers. 6 to 9 filling heads for multiple filling. Most automatic oneoperator filler. Write for "Bulletin B-49."



MODEL B-2 VACUUM FILLER. Fills continuously. For containers up to 41/4" dia. Portable. Request "Bulletin B-2."

U. S. SIPHON FILLER for all containers, all liquids including foamy products. Get "Siphon Bulletin."



Production SECTION

Package Engineering...

Compatibility of product and package essential to successful engineering of a sound package. Choice of equipment depends upon characteristics of product, volume, type of operation, where used.

HE successful engineering of a good package must take many factors into consideration. Product characteristics, although very important, are just one of the many aspects which include: volume to be handled: type of operation—batch or continuous; means of transportation to be used and distances to be covered; shipping conditions—export or do nestic, tropical or arctic, etc.

Packaging material and type of container must be compatible with and practical for the product. In addition they must be suitable to the packaging method which may be manual, semi-automatic, or continuous. A product may be filled by efficient machines into a container of good material and still be an economic failure. The cause may be hard to establish because so many factors have a bearing on the development of a good consumer package. In some cases a product may simply be "overpackaged." Failure may be due to incompatibility of packaging material with the product. This incompatibility may consist of permeability to vapor or aromatics or UV light. An otherwise excellent packaging material may show poor printability. Another source of economic packaging problems is the purchase of expensive and high speed packaging machinery, the capacity of which cannot be fully utilized. This results in the machinery being idle for long periods.

The question of utilizing

plant capacity is especially timely in view of the current trend toward automation. In its ultimate form automation is profitable only for certain products which are manufactured continuously and in constantly large quantities, according to an article by St. M. Zentzytzki, which appeared in full in Seifen-Oele-Fette-Wachse, June 24, 1959. In a sense every machine is an automatic device, but the extent to which one elects to carry automation should be determined only by its profitability. Fully automatic packaging may not always be the most rational approach to the handling of granular or powdered products and manual processing may be advisable in certain instances, it was pointed out recently by a German packaging authority.

Modern machinery permits the employment of one line to perform all the steps in the packaging of a liquid or solid product. Such an installation can handle the setting up, printing, filling, and sealing of the container. As an alternative each one of these steps may be performed by independent units. Only by meticulous evaluation of all factors pertaining to the particular operation can one intelligently decide which of the two approaches will yield the most economical results. In deciding it must be remembered that in fully automated installations, capable of speeds of up to 300 units a minute the properties of the packaging material may be very critical. The

surface of the packaging material as well as its tendency to wrinkle must be considered. Any change in the container's measurements, however slight, intentional or unintentional, may create a problem. Sometimes efficiency of a fully automated line is impaired by the minute changes due to modified storage conditions, etc.

Powdered Products

Two main systems are available for packaging powders. One employs weighing-filling equipment, the other a metering system. Certain products lend themselves equally well to handling by either system. In most instances the choice must depend on product characteristics and on the degree of accuracy required. Granular free flowing products are handled best by weighing-filling equipment, especially in large quantities. In order to accomplish a high degree of accuracy such installations usually feature product flow divided into a full stream and a dribble, which is electronically controlled. Such lines are capable of handling units ranging from 50 grams to 100 kilos at speeds of from two to 45 packages a minute, depending entirely upon the nature of the product and the type of container which may be a pouch, jar, box, or big. A wide variety of operations and rates of output are possible with weighing-filling type of packaging machinery.

Metering fillers, widely used

to handle powdered products, come in a variety of designs. Installations using a carriage or chamber to measure the fill offer the advantage of simple construction but accomplish good weight accuracy only with products of uniform particle size and specific gravity. A high degree of accuracy combined with limited speed is characteristic of metering fillers using a plunger, the action of which causes a slight vacuum. Machines working with a rotating plate provide high speed but their successful use is confined to finely granular free flowing materials which do not tend to agglomerate or lump.

Another design, unusual but very serviceable for certain operations combines the revolving plate with the action of a screw. An auger or screw revolving continuously in the storage reservoir forces the product into the pockets of the revolving plate passing under the outlet. After a further revolution of the plate the product is expelled from the pockets by a plunger or ram and fed into the regularly spaced containers passing below.

Screw type metering devices are widely used to deliver a measured amount of powdered product. Weight accuracy attained with this type of filler equals that of accurate scales or balances. The screw or auger feeder delivers a metered amount of product directly from the reservoir to the container. which is a definite advantage. Mechanical adjustment of quantities is accomplished by varying the number of screw revolutions. Modern machines of this type are equipped with additional electric and electronic controls which ensure highest precision in the handling of the smallest weight units. Screw type filling machines can be designed to permit easy exchange of both the screw and the chamber. This feature adds greatly to the versatility and range of usefulness of such an installation. Screw type metering fillers can handle units ranging from 10 mg to the kilo at speeds of up to 75 packages a

minute, depending, of course, upon the product and the machine.

Liquid Products

Formerly the packaging of liquids was confined to glass or tin plate. Modern plastics technology has created a far more complex picture. There is hardly a synthetic packaging material today which does not enter the field of liquid packaging either alone or in combination with traditional materials. Choice of the correct packaging medium requires expert advice, which may be supplied by the manufacturer of the filling machine or by the packaging engineer. A few major points to be considered in the selection of container and filling system will be outlined here.

Liquid specialty products include items of low, medium and high viscosity, although of course no sharp dividing line can be drawn since temperature plays such an important part. The two most important liquid filling sys-

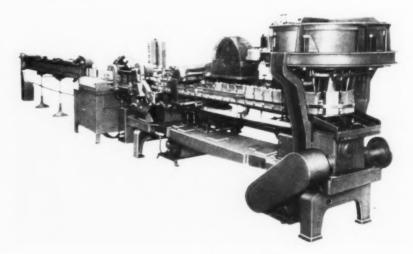
tems are based on either the volumetric or gravity principle. Volumetric filling ensures correct fill without product waste through precautionary overfill. Gravity systems on the other hand fill each container to the same level, thus eliminating customers' complaints due to differences in fill level, which occasionally occurs with predetermined fill. Gravity systems may be of the syphon, pressure, or vacuum type, the latter being the most popular. Volumetric filling may be acomplished by the use of measuring "cups" or proportioning pumps, which are more widely used.

Of the gravimetric methods vacuum filling has found the widest acceptance for a number of reasons: It eliminates dripping, a nuisance in many filling operations; it does not require dispensing valves which are subject to wear and must be replaced; and it does not fill faulty containers. Haz-

New Carton Filling System

A new automatic carton filling and sealing system for products with varying densities was introduced recently by the packaging machinery division—Stokes & Smith plant of Food Machinery and Chemical Corp., 4992 Summerdale Ave., Philadelphia 24. A measured amount of product is discharged as empty, bottom-sealed cartons are moved into position under a revolving filling head. A check-

weigher, incorporated into the machine, automatically weighs every carton after it is filled. Package weights are collected and averages fed-back to the rotating filling head to adjust the amount of fill as changes in density occur. Extreme overweight and underweight cartons are rejected from the line before seals are firmly set in the drying conveyor. The machine handles cartons of all types from one ounce to three pound sizes.



ards inherent in the gravity system are product foaming and difficulty in accurate measuring. However, there are a number of modern designs which make the most of the advantages and minimize the short-comings mentioned above.

Accuracy of fill obviously is the prime consideration in volumetric filling. Metering pumps are most frequently employed to accomplish this aim. These pumps are usually designed to be adjustable. In many instances the range of their adjustability is over-extended, probably as a talking point in a competitive field, according to the author. However, adjustment to exceedingly small fill yields poor accuracy, the author contends. For best results the pump's normal working range should approximate as closely as possible the average doses required by the operation. The range of adjustability should not be expected to exceed a range of 10 to one.

Selection of suitable containers is another critical factor which may spell success or failure of a package. Width of opening and type of closure are among the major points to be considered. Container openings of seven to 18mm are considered normal, seven mm and less are narrow, and wider than 18mm are wide. Filling heads must obviously be adjusted to the width of the container opening which in turn is determined by the consistency of the product. This may be very mobile; of light or medium viscosity; pasty, stringy, foaming, etc.

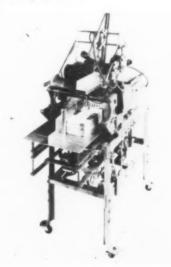
Closures may be designed to be put on by hand or by machine and may be made of cork, metal, rubber, and a variety of plastic materials. Closure, container, product, filling machine, and end use of the package must be perfectly attuned to insure success.

Finally, filling machines for pillow type plastic pouches must be mentioned, since they are rapidly gaining in popularity. This system makes unit packages by cutting a plastic sleeve or tube and heat sealing the sections (Rado system.)

Details of automatic and semi-automatic filling and packaging equipment, engineered and marketed by various German firms are discussed next. This summary will confine itself to a few salient points. A filling line said to be especially suitable for laundry and other washing compounds in powder form sets up and bottom-seals the cartons, measures the product, fills and vibrates and finally seals the container. Such installations feature an electronic "no container -no fill" device and an electronic device for rejection of faulty pack-

New Labeling Machine

An automatic labeling machine for round containers was introduced recently by Long and Co., 4125 Hayward Ave., Baltimore 15, Md. Designated as model 4-A, the machine features a large label reservoir, pressure roll, and automatic escapement. It is said to apply both spot and wrap around labels onto round containers of from one and one-eighth to seven inches in diameter and can handle 36 containers per minute. According to M. A. Long, president, an important feature of the machine is that it automatically applies both spot and wrap around labels without changeover parts. The company manufactures the "Atlantic" line of labelers.



ages. Various output capacities are available to insure full utilization. Other cartoning machines may be had for manual, semi-automatic and automatic operation. They may be used either with manual filling apparatus or with automatic filling machines, as part of a continuous process if so desired. The filling units are available with weighing or metering devices. This system can use a new type of carton said to be completely dust-, air-, and vapor-proof. This is accomplished by a thermoplastic coating by which top and bottom may be heat sealed to the body of the container. A specially designed automatic packaging machine performs all these operations.

Flat pouches of heat sealable materials are formed by machines which also fill these pouches with powders, granules, pastes, or liquid products, and finally heat-seal them. The stock used might be coated papers; weather resistant. cellophane; films such as polyethylene, "Saran" or PVC laminated to cellophane or other materials; and aluminum foils. Pouch formers work from roll stock and. depending upon number of rolls and thermoplastic properties of the stock three or four sides of the unit can be sealed partially or entirely invisibly.

Sealing heat and pressure can be set and thermostatically controlled. A special photo-electric control device dispenses with the necessity of marking the bags to ensure straight imprints.

Some of the liquid filling machines utilize weighing apparatus to measure and fill the product. A semi-automatic metering and filling unit for liquids and pastes uses compressed air to activate a proportioning pump. Since only the level releasing the compressed air is manually operated the operator of this machine is subject to less fatigue and attains a higher output than would be the case with a manually operated unit.

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- no operator required
 machine runs completely unattended
- ▶ eliminates bottle scuffing, "hammer" breakage
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- cases as fast as your filling line will feed
- quick change-over from one size bottle or case pattern to another
- ▶ the only unit that can case gallon jugs



Your nearest Barnes representative can show you a movie of this new caser in action.

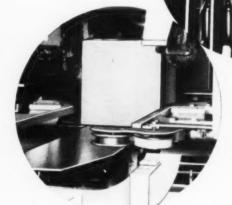


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Lifter "fingers" raise bottles up into bottom of case, slightly fanning them for position entry into case cells without label scuffing



Flaps are automatically glued and closed; case next moves into position for warehousing or shipment

OTHER EQUIPMENT INCLUDES: BARNES RETORT BASKET LOADER . BARNES RETORT BASKET UNLOADER . BARNES SINGLE FILER CUSTOM DESIGNED CONVEYORS . PACKING AND PROCESSING UNITS FOR THE FOOD, DRUG AND PROCESS INDUSTRIES

tles, jars, cans, folding boxes and tubes is performed by a series of machines of highly versatile design. The smallest model can handle units of from 100 to 1200 cm3 at speeds of up to 2100 units an hour, the largest handles 500 to 22,000 cm3 sizes at maximum speeds of 300 containers per hour. The machines feature two proportioning pumps, with the exception of the largest model which has only one pump. They are hooked up with chain conveyors which bring up and remove the containers. Filling volume and speed can be adjusted during processing and there is a "no container - no fill" device. The fillers can be adapted to handling folding boxes and bags. They can also fill viscous products in bottles by means of a wide range of attachments.

The "Rado" system forms polyvinylchloride pouches and fills them with liquids and pastes. The article in Scifen-Oele-Fette-Wachse describes the "Rado" system in detail. Length of the package can be varied from 15 to 200 mm, Maximum capacity of such systems is 6000 packages per hour. Special electrodes are available for the forming of other than pillow shaped pouches.

The use of the "Rado" system for small unit packaging is subject in certain countries to licensing by Herfurth G.m.b.H., Hamburg-Altona.

A machine which makes flat pouches of heat scalable materials in sizes ranging from 30 to 45 mm to 80 by 130 mm fills these units with 0.5 to 20 cm³ of product at rates of up to 60 bags a minute. For the handling of highly viscous products the filling funnel can be sheathed in an electrically heated water jacket which features thermostatic controls.

For details see Seifen-Oele-Fette-Wuchse, Beethovenstr. 16, Augsburg, Germany, which published St. M. Zentzytski's article in full in its spencial packaging issue, June 24, 1959.

Surfactant Production Up 10% in 1958

TINITED States production of surface active agents in 1958 amounted to 1,335 million pounds, a 10.7 per cent increase over the 1957 output of 1,206 million pounds. Sales in 1958 amounted to 1,200 million pounds valued at \$235,000,000, compared with 1,123 million pounds valued at \$217,-000,000 reported in 1957. These statistics were released recently by the U.S. Tariff Commission and constitute its preliminary report on U.S. production and sales of surface active agents. All figures are given in terms of 100 per cent content of active ingredients.

The current report is the first to break down production and sales of surfactants according to ionic classes. 977 million pounds of anionics were produced in 1958, accounting for 73 per cent of the total output of surface active agents. Sales of anionics are reported at 899 million pounds, valued at \$148,000,000.

Production of non-ionics in 1958 totalled 329 million pounds; their sales amounted to about 273 million pounds valued at approximately \$71,000,000.

About 27 million pounds of cationic surface active agents were manufactured in 1958; sales are reported at 26 million pounds valued at about \$15,000,000.

Amphoterics were produced and sold in 1958 at the rate of two million pounds. Their sales were valued at \$1,000,000.

As in previous years figures on production and sales in the latest report are given for cyclic and acyclic surface active agents. By far the greatest growth in production, 15.8 per cent, was recorded by the acyclic group. Output amounted to 499 million pounds reported for 1957. The sulfated and sulfonated acyclic compounds accounted for almost half of the total acyclic production, with alcohols and esters the most important individual products. Sales of acyclic surface active

agents in 1958 are reported at 436 million pounds, worth \$110,000,-000

Cyclic compounds were the largest class of surface active agents, and accounted for almost two-thirds of the total 836 pounds. The 1958 total of 836 million pounds exceeds 1957 production of 775 million pounds by 7.9 per cent. Sales of cyclic surfactants in 1958 were about 764 million pounds, valued at \$125,000,000, compared with 741 million pounds, and \$119,000,000 in 1957. The dodecylbenzene sulfonic acid type of surfactant was the most important product in this class.

The above statistics, although of a preliminary nature, are said to be 95 per cent complete. The Tariff Commission's final report is due to be published later in the year. Copies of the preliminary report on production and sales of surface active agents may be obtained from the Tariff Commission, Washington 25, D.C.

New Antistatic Agent

A new non-durable antistatic liquid suitable for aerosol use has been developed by Onyx Oil & Chemical Co., Jersey City 2, N. J. "Aston AP", described as a cationic polyamide, comes as a 100 per cent active concentrate and in 50 per cent dilution in a water/isopropanol mixture. In addition to its application as antistatic softening agent for textiles the compound is said to hold promise as a softening and conditioning additive for hair and skin products. It enhances the absorbency of synthetic fibers and is claimed to impart bacteriostatic activity to textiles.

"Aston AP" is readily soluble in water and in a wide range of organic solvents and is compatible with cationic, non-ionic and many anionic compounds. It is suggested for use in aqueous and organic solvent formulation to be applied as aerosol or other sprays.

CAPEM SCREW CAPPERS

Speed production for Texize Chemicals, Inc.

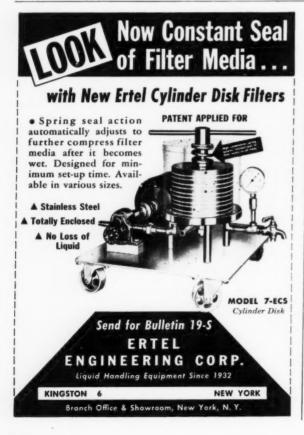


CONSOLIDATED PACKAGING MACHINERY CORP.

1400 WEST AVENUE, BUFFALO 13, NEW YORK

This Model D-6-F Rotary CaPeM increased production to such an extent that Texize Chemicals, Inc., Greenville, S. C. recently ordered a duplicate. This completely automatic line is operated continuously at production rates in excess of 200 bottles per minute.

CaPeM Screw Cappers apply all types of metal and plastic screw caps to jars, bottles, cans and jugs ranging in size from 1 oz. to gallons. Speeds range from 40 to 300 containers per minute. Write for complete information.





Book Reviews

Ethylene Oxide Surfactant Book

A NEW German volume, "Surface Active Condensation Products of Ethylene Oxides" deals with the production, properties and uses of these compounds. Claimed to be the first comprehensive work on the subject, it is slanted mainly to the need of the production man and of the laboratory worker, according to its author, Nikolaus Schoenfeldt. However, the book carries such a wealth of reference material that the basic research chemist could doubtless profit from its use.

The first brief chapter outlines the properties and characteristics of ethylene oxide, discusses its manufacture and starting materials. The production of ethylene oxide adducts is covered in chapter two. After a short account of the history of these compounds the chapter gives the current theories on the mechanism of the condensation reaction. Condensation products are classified according to type of bond, and this system is applied to a list of ethylene oxide condensation products made by the former I. G. Farben A. G. Many of these compounds serve as prototypes, such as the "Emulphors", "Igepals", and "Alipals" to name just a few.

The adducts are described in chapter three, which covers their physical and chemical properties such as structure, solubility, capillary activity, micelle formation, antistatic activity, and chemical stability. Functional properties described include wetting, foaming, emulsifying, dispersing and solubilizing power. Washing and cleansing power is divided into laundry. dishwashing, and general cleaning properties. Dermatological, medicinal, toxicological and bactericidal properties are covered as well as influence on sewage treatment in a section entitled "biological characteristics". Last part of this

chapter correlates chain lengths with properties.

Washing and cleaning compounds head the applications of ethylene oxide condensates dealt with in the fourth chapter. The wide range of other uses includes pesticides, cosmetics, metal cleaning, iodophors, etc. This chapter contains a generous number of formulations, which are to be considered general suggestions rather than specific recipes.

Sulfated adducts, their manufacture and properties are treated in the fifth chapter, which points out that detergency, foaming, and other functional characteristics gain by sulfation. The sixth and last chapter is devoted to analytical methods. An appendix consists of

a list of branded products and their manufacturers. Numerically arranged lists of German, American, British, French, Swiss, Japanese, and Swedish patents are included also. Each chapter is followed by a very comprehensive list of references from the technical literature of many nations active in the field. In fact this is one of the most internationally conceived reference books in a specialized field this reviewer has ever encountered.

A subject index is appended as well as an author and company index the listings of which really are an international "Who is Who" in the nonionics and general surfactant field.

"Oberflachenaktive Anlagerungsprodukte des Aethylenoxyds" by N. Schoenfeldt, published by Wissenschaftliche Verlagsgesellschaft m.b.H., Stuttgart, Germany, 1959, 452 pages, 67 illustrations, clothbound, price DM 68...

Davison's New Edition

The 94th year edition of "Davison's Textile Blue Book" was recently published by Davison Publishing Co., Ridgewood, N. J. With more than 1,400 pages, the book contains information about textile mills and suppliers to the textile industry listed alphabetically and geographically. It is available in an office edition at \$9.75 and a hand book edition at \$7.25.

New Testing Service

Screening, testing, toxicological evaluation and development of new products in the pesticide field are the services offered by Bio-Search and Development Co., 2019 West 71st Terrace, Kansas City, 15, Mo. J. B. Skaptason is president of the firm. The scope of its activities includes: nematocides, fungicides, bactericides, herbicides. The organization is geared to develop new compounds and to search for new uses for established products.

A folder is available giving detailed information on the staff and their qualifications, and on the range of services available from Bio-Search.

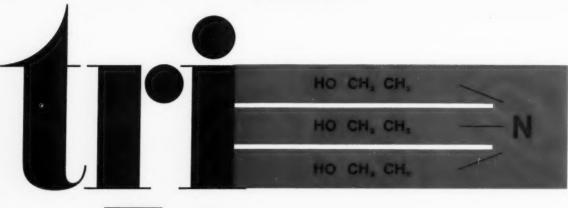
New Hub States Catalog

Hub States Chemical and Equipment Co., 1255 N. Windsor St., Indianapolis 1, Ind., recently published its 1960 "PCO Equipment Catalog" featuring information on its line of pest control and maintenance equipment. The booklet provides data on all types of spraying equipment; rat control devices; and drug handling equipment. Specifications and prices on most items are included in the catalog.

New Warfarin Folder

A four-page folder titled "Rat Control with Warfarin" appeared as an insert in a recent issue of "Better Farming Methods" and was sponsored by the Wisconsin Alumni Research Foundation, P.O. Box 2217, Madison, Wis. The folder provided information about rodent control and described the features of warfarin pesticides. A limited supply of reprints is available from the Foundation.

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It won't hold for everybody, but in some applications where di- or triethanolamine is being used, there are positive advantages to be gained from switching to mono-. For example, MEA can frequently be used advantageously as the amine in amine soap emulsifiers for such products as cutting oils, weedicides, waxes and buffing compounds. In some instances total amine required is reduced to the extent that cost is

reduced. In some cases mixtures of MEA and TEA are better than either alone. MEA may improve performance while TEA maintains a lower pH.

If your product or process now utilizes DEA or TEA, it may pay you to evaluate MEA. Allied makes all three, and will give you technical suggestions that may help you reduce costs, improve efficiency or make a better product. Write for any technical assistance you need.

For specifications and local offices, see our insert in Chemical Materials Catalog, pages 435-442 and in Chemical Week Buyers Guide, pages 35-42.

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NEW Patents

The data listed below are brief reveiws of recent patents. Complete copies may be obtained from the publisher of this magazine:—Mac-Nair-Dorland Co., 254 W. 31st Street. New York 1, N. Y. Remit 50¢ for each copy. For orders received from outside of the United States send \$1.00 per copy.

Nos. 2,892,816; 2,892,818; and 2,892,819. Detergent Copolymers, patented by Warren Lowe, Berkeley; ented by Warren Lowe, Berkeley; William T. Stewart, El Cerrito; Frank A. Stuart, Orinda; and Frank W. Kavanagh, Berkeley, Calif., assignors to California Research Corp., San Francisco, Patent No. 2,892,816 claims an oil-soluble copolymer of the monomers including at least (A), (B), and (C) of the following: (A) pol-ymerizable oil-solubilizing compounds selected from the group consisting of olefinic hydrocarbons, olefinic ethers containing a single oxyger atom and hydrocarbon carboxylic acids containing at most two carboxy groups fully esterified with monohydroxy hydro-carbons, said compounds having a single ethylenic linkage and containing a monovalent hydrocarbon group from 8 to 30 aliphatic carbon atoms, (B) esters of acidic compounds seesters of acidic compounds selected from the group consisting of α,β-ethylenically unsaturated monocarboxylic acids of from 3 to 8 carbon atoms each and α,β-ethylenically unsaturated, α,β-dicarboxylic acids of from 4 to 12 carbon atoms each wherein the carboxyl groups of said acidic compounds are proposeteracidic compounds are monoester-linked to a member of the group consisting of poly-1,2-alkylene glycols and monoalkyl ethers thereof having from 2 to 7 carbon atoms in each alkylene group and a molecular weight between about 200 and 10,000, (C) polymerizable compounds selected from the group consisting of unsubstituted amides, N-hydrocarbon amides, N-hydrocarbon amine salts and substituted N-hydrocarbon amides and N-hydrocarbon amine salts of a, s-ethylenically unsaturated monocarboxylic acids of from 3 to 8 carbon atoms each and corresponding diamides and diamine salts of a.8- ethylenically unsaturated, α, β -dicarboxylic acids of from 4 to 12 carbon atoms each wherein the substituent on said substituted monovalent hydrocarbon group is at least one polar group selected from the group consisting of hydroxyl and amino groups, (D) acidic compounds selected from the group consisting of a, s-ethylenically unsatu rated monocarboxylic acids of from 3 to 8 carbon atoms each, α,β -ethylenically unsaturated, α,β -dicarboxylic

acids of from 4 to 12 carbon atoms each, and anhydrides, half-esters, half-amides and monoamine salts of said dicarboxylic acids, the ester, amide and salt groups being as defined in (B) and (C), said oil-soluble copolymer having an apparent molecular weight of at least 2,000 as determined by the light scattering method and from about 1 to 20 monomer units of the oil-solubilizing component (A) for each monomer unit of the (B), (C) and (D) components.

Covered by No. 2,892,818 is an oil soluble copolymer of monomers selected from at least each of the first two classes of the classes consisting (1) polymerizable oil-solubilizing compounds selected from the group consisting of olefinic hydrocarbons, olefinic ethers containing a single oxygen atom and hydrocarbon carboxacids containing at most two boxy groups fully esterfied with carboxy groups fully morohydroxy hydrocarbons, said compounds having a single ethylenic linkage and containing a monovalent hydrocarbon group of from 8 to 30 aliphatic carbon atoms, (2) at least one ester selected from the group consisting of monoesters and diesters of a, \beta-ethylenically unsaturated a, \beta dicarboxylic acids of from 4 to 12 carbon atoms each, wherein the carboxyl groups of said acids are mono-ester-linked to a member of the group consisting of poly-1,2-alkylene glycols having a molecular weight between about 400 and 10,000 and from 2 to 7 carbon atoms in each alkylene group monoalkyl ethers thereof and (3) acidic compounds selected from the group consisting of α,β -ethylenically unsaturated monocarboxylic acids of from 3 to 15 carbon atoms each, α,β ethylenically unsaturated α,β dicar-boxylic acids of from 4 to 12 carbon atoms each, anhydrides and moroes-ters of said dicarboxylic acids in which the alcohol moiety of the ester group is an aliphatic hydrocarbon containing from 8 to 30 carbon atoms, there being present from 1 to 20 monomer units of the oil-solubilizing component (1) for each moromer unit of components (2) and (3), said copolymer having an apparent molecular weight of at least 2,000 as determined by the light scattering method and a solu-bility in lubricating oil of at least 0.5% by weight.

No. 2,892,819 describes another oil-soluble copolymer of monomers selected from at least each of the first three classes of the classes consisting of (A) polymerizable oil-solubilizing compounds selected from the group consisting of olefinic hydrocarbons, olefinic ethers containing a single oxygen atom and hydrocarbon carboxylic acids containing at most two carboxy groups fully esterfied with monohydroxy hydrocarbors, said compounds having a single ethylenic linkage and containing a monovalent hydrocarbon group of from 8 to 30 aliphatic carbon atoms, (B) esters of acidic compounds selected from the

group consisting of esters α,β -ethylenically unsaturated monocarboxylic acids of from 3 to 8 carbon atoms each and diesters of α,β -ethylenically unsaturated α,β -dicarboxylic acids of from 4 to 12 carbon atoms each, said esters having the carboxyl groups of the acids monoester-linked to a member of the group consisting of poly-1,2-alkylene glycols and monoalkyl ethers thereof having from 2 to 7 carbon atoms in each alkylene group and a molecular weight of between about 200 to 10,000, (B') esters of the monocarboxylic acids and dicarboxylic acids as defined in (B) having the carboxyl groups of the acids mono-ester-linked to an aliphatic alcohol from 2 to 10 carbon atoms wherein at least 50% of the carbon atoms of said alcohol are attached to polar groups selected from the group consisting of hydroxyl and amino groups, and (C) acidic compounds selected from the group consisting of α,β ethylenically unsaturated monocar-boxylic acids of from 3 to 8 carbon atoms each, a, \beta-ethylenically unsaturated a, \(\beta\)-dicarboxylic acids of from 4 to 12 carbon atoms each, anhydrides of said dicarboxylic acids and halfesters of said dicarboxylic acids, with a member of the group consisting of poly-1,2-alkylene glycols, alkyl ethers thereof and aliphatic alcohols as defined in (B), said oil-soluble copolymer having an apparent molecular weight of at least 2,000 as determined by the light scattering method and from about 1 to 20 monomer units of the oil-solubilizing component (A) for each monomer unit of components (B), (B) and (C).

No. 2,886,217. Dispensing Device, patented by Charles G. Thiel, Santa Monica, Calif., assignor to Riker Laboratories, Inc., Los Angeles. This patent discloses a draining device, combined with a pressurized tainer having a valve, and capable of cooperating with said valve for exhausting the liquid contents of pressurized container, said container having a mouth, said valve having a housing disposed therearound, and closure means attaching said valve and valve housing to said container and valve nousing to said compris-mouth, said draining device compris-ing a chamber means having an open end, a closed end wall and a side wall, a small unitary orifice in said side wall in close proximity to said open end, said chamber means being dis-posed with said closed end wall extending inwardly into said container and being dimensioned to receive, in encompassing relation, said valve housing, said chamber means having holding means adjacent said open end said holding means being capable of positioning said chamber means about the inwardly projecting portion of said valve and valve housing in a manner which closes said open end of said chamber means.

No. 2,891,912. Opalescent Detergent Composition, patented by Anthony M. Schwartz, Washington, D. C., assignor to the Gillette Co. Boston, Mass. A pearly opalescent shampoo composition is patented consisting essentially of an aqueous solution containing from 10% to 40% by weight of a synthetic organic deter-

(Turn to Page 171)

SHAMPOO BASES from

polypeptide fatty acid condensate

MAYPON 4 C The standard grade Maypon of unsurpassed mildness for producing...

Cream Shampoos
Cold Wave Solutions
Liquid Bath Preparations
Cosmetic Creams

MAYPON 4 CT An advanced development of Maypon 4 C recommended for...

Liquid Shampoos Pressurized Shampoos

MAYPON

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Maypon 4 C, 4 CT and DP all satisfy the Draize-Woodward Eye Irritation Test in all concentrations.

MAYWOOD CHEMICAL WORKS
MAYWOOD, NEW JERSEY
ESTABLISHED 1895



SOAP PLANT Observer

By Willis J. Beach

Technical Service Department, Sugar Beet Products Co.

POXY resins, one of the marvels of modern chemistry, have been a particular boon to the chemical industry itself. Their use in industry has increased tremendously, particularly during the past three years. Epoxies serve as adhesives, laminating agents and for a variety of coatings.

Books have been written about the epoxies. Our interest lies merely in the advantages they, and certain other innovations based on them, bring to the production and maintenance man in and about the soap plant.

The epoxies are noted particularly for their hardness and chemical inertness. Almost as important is the flexibility they offer in handling. A simple explanation to account for their rigidity and hardness is that they are cured or hardened by the use of another compound which reacts with them chemically in a sort of cross-linking fashion, forming a mesh-like structure of high rigidity. The chemical bond between the resin and curing agent is extremely stable. and when sufficient hardener is used for curing the resin fully, the resin is no longer reactive and is resistant to all but the most corrosive of chemical environments.

The epoxy resins derive their versatility partially from the fact that they are available in a variety of physical forms including liquids, solids and semi-solid putties. The setting or hardening time may be hastened or retarded to meet individual conditions by the amount and nature of curing agent used and by the application of heat. They may be cured brittle, or tough and tenacious. They may be combined with plasticizers and a variety of additives without serious loss of their bonding strength



and ability to adhere to almost any solid surface.

With this background it is easy to see why epoxy resins can be so helpful to the maintenance or production man busy with a manufacturing schedule that permits little time for lengthy shutdown to make repairs.

Epoxy resins form the base for the rather new so-called "plastic metal" specialties with a variety of uses including maintenance and plumbing repairs, salvaging metalparts, rebuilding machinery, foundry patterns, core boxes, jigs, dies, moulds and what have you.

One such moulding and filling'compound, "Plastic Steel," offered by Deyron Corp., Danvers, Mass., is approximately 80 per cent steel and 20 per cent plastic. The product line, known as "Devcons", includes also an 80 per cent aluminum - 20 per cent plastic formulation. Since an amine curing agent is used, we suspect the plastic is an epoxy, but it may be a polyester or one of the new isophthalics. The material can be moulded into shape like moulding clay without heat or pressure. Two hours after hardener addition it is an extremely strong, tough, rigid metallic

piece capable of being sawed, drilled, tapped, threaded, etc., with conventional metal working equipment.

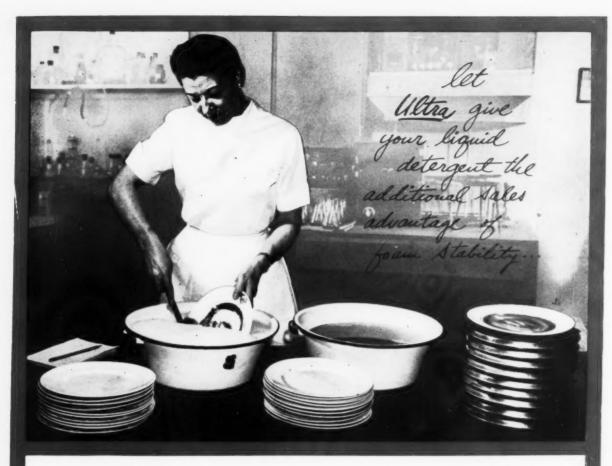
An important feature of the epoxics is that they bond readily to many other materials in addition to metals. These include porcelain, glass, wood, concrete and other plastics.

It is interesting to note that metal dispersed in plastic as it occurs in the "Devcon" products is not readily attacked by chemicals. The 80 per cent steel product shows a -0.06 per cent change in weight after fourteen days immersion in 100 per cent hydrochloric acid at 70 F. The product is also resistant to organics such as fatty acids, aromatics, alcohols, ketones, and to caustic solutions at 70°F. Strange as it may seem, the product is said to be essentially non-conductive.

Around the soap plant, the "Plastic Steels" can be useful for a number of jobs such as repairing tanks, valves, pumps and faulty castings, and for various metal forming jobs. "Plastic Steel" dies have been made for less than 10 per cent of the cost of steel dies and in a fraction of the time required by conventional methods.

Cutaneous Problems

The use of the epoxy resins in industry has not been without some misgivings. Those of us in the industrial skin cleaning business are aware of two problems associated with their use - skin irritation and tenacity. Excepting certain resins of the liquid types, most of the epoxy resins without curing agent can be handled with reasonable safety to the skin. The fully cured resins do not irritate the skin. During the curing process, however, the partially cured epoxies must be removed promptly from the skin or they will cause irritation. A number of complex types of amine are employed as curing agents. These free amines are the trouble makers; however, some of the epoxy resin suppliers now claim to have developed hard-



In this dishpan containing a typical liquid dishwash formula plus an Ultra Foam Stabilizer, 10 plates were washed. Enough thick, rich suds remained for up to 40% more plates.



In this dishpan containing the same typical formula without Ultra's Foam Stabilizer, the foam completely broke down after 10 plates were washed.

In repeated comparison plate-wash tests using identical formulas, detergents fortified with Ultra Foam Stabilizers consistently exhibited up to 40% more foam stability.

If your liquid detergent lacks the advantage of foam stability, it is failing you in today's competitive market.

Unnecessarily so. Because Ultra can provide this advantage easily and economically—with exactly the right foam stabilizer to meet your specific needs.

Ultra's foam stabilizers also impart other features that will help to increase your sales in both consumer and industrial markets:

- They add "slip" a soft feel with an emollient effect beneficial to consumer's hands.
- They possess a mild, bland odor that permits the use of a selling scent instead of a masking scent.
- They are light in color—help maintain desired finished product color.
- They act as viscosity building agents, giving body to your detergent—a strong appeal to industrial users.

Write for our bulletin on the properties and applications of Ultra Foam Stabilizers. Or, call Ultra's Director of Technical Service for help on your formulation problems.

ULTRA CHEMICAL WORKS

Division of Witco Chemical Company, Inc., 2 Wood Street, Paterson, N. J.



ening agents that are easier on the skin.

The epoxies, of course, are very difficult to remove from the skin. In spite of some advertising claims, we have not yet seen a safe cleaning agent that will remove the fully cured resin from the skin. Some special skin cleaners are now reaching the market that will remove the epoxy resins when cured up to about 90 per cent. They may, however, exhibit a drying effect on the skin

If the epoxy can be removed from the skin soon after it is applied, there is a much better chance of avoiding skin irritation. On-the-job use of the waterless type of hand cleaner has been helpful for problems involving this hard-to-remove irritating soil. Frequent use of this type of cleaner may result in dry skin, and an emollient cream or hand conditioning lotion might be called for at the close of the work day.**

New Patents

(From Page 167)

gent and dispersed therein from 1% to 20% by weight of a finely divided solid compound of the class consisting of the amides and diamides whose acid residues are monocarboxylic having an aliphatic chain length of 2 to 24 carbon atoms and whose amine residue each contains an amino nitrogen atom bonded directly to a nuclear carbon atom of an aromatic hydrocarbon radical, the remaining valences of each amino nitrogen atom being satisfied by hydrogen.

No. 2,892, 796. Detergent Composition Containing Phosphated Alkyl Glyceryl Ether Corrosion and Tarnish Inhibitor, patented by Homer W. McCune, Wyoming, O., assignor to Procter & Gamble Co., Cincinnati. A detergent composition is described comprising a calcium sequestrant selected from the group consisting of water-soluble salts of tripolyphosphoric acid, of ethylene diamine tetra acetic acid, of hydroxy ethyl ethylene diamine triacetic acid, of nitrilo triacetic acid, and mixtures thereof, and the reaction product of an alkyl glyceryl ether, containing from 14 to 18 carbon atoms in the alkyl chain, with an amount of inorganic phosphating agent sufficient to supply at least one gram-atomic weight of phosphorus per gram-molecular weight of alkyl glyceryl ether, the said reaction product being present in an amount from about ½% to about 20% by weight of the calcium sequestrant, the said detergent composition being inhibited from tarnishing cop-

pery alloys and corroding aluminum and zinc by the said reaction product.

No. 2,894,912. Isethionate Detergent Bar, patented by Robert C. Geitz, Demarest, N. J., assignor to Lever Brothers Co., New York. Described in this patent is a detergent bar consisting essentially of from 30 to 70% of water-soluble alkali metal detergent salts of esters of isethionic acid with mixed aliphatic fatty acids having from six to eighteen carbon atoms and an iodine value of less than 20, of which mixed acids at least 75% have from twelve to eighteen carbon atoms and up to 25% have from six to ten carbon atoms, from 2 to 10% of at least one water-soluble sudsboosting detergent salt selected from the group consisting of alkali metal and organic amine higher aliphatic fatty alcohol sulfates, alkyl aryl sulfonates, and higher aliphatic fatty acid taurides, from about 1% to about 9% water, from about 25% to about 25% of water-soluble higher fatty acid soap, and from 10 to 40% of at least one higher fatty acid having from about twelve to about twenty-five carbon atoms as a binder and plasticizer, said bar having a pH within the range from 6 to 8, measured as a 10% aqueous solution of the bar composition at 35° C.

No. 2,894, 660. Dispenser Cap, patented by Edward L. Gordon, Pittsburgh, Pa. In a cap for a pressure can having a valved closure in its head and a valve stem projecting thereabove, said cap including a cylinder the lower end of which fits tightly over said head, a spout extending laterally from said cylinder and a deflectable disc mounted transversely in said cylinder having a passage therein communicating with said spout and a seat on its under side fitting over said stem and provided with an opening into said passage, the patent covers the combination therewith of a dome-shaped, flexible, resilient diaphragm fitted in the top of said cylinder and overlying said disc, and a port in said disc communicating with said passage whereby the return of the diaphragm to normal condition, on release of finger pressure, exerts a suction tending to withdraw from the end of the spout any material remaining therein on release of said disc.

No. 2,893,960. Soap Bar, patented by Edward M, McNally, Red Hook, N. Y., assignor to Voorhis-Tiebout Co., Red Hook, Covered is a rectangular soap bar for use in a shredding dispenser, said bar having in one face thereof a relatively deep groove, and in the opposite face a pair of parallel shallow recesses, said groove and recesses extending lengthwise of the bar, said groove having its deepest portion located centrally of the width of the face in which it is formed, and said recesses being disposed one at each side of the central portion of the face in which they are formed,

No. 2,895,916. Method for Preparing Detergent Compositions, patented by Joseph A. Milenkevich and James E. Henjum, Cincinnati, assignors to Procter & Gamble Co.,

Cincinnati. Revealed is a process for preparing detergent compositions comprising a water-soluble alkaline condensed phosphate, a water-soluble alkali metal silicate, and chlorinated trisodium phosphate which comprises adding to a substantially anhydrous alkaline condensed phosphate an alkali-metal silicate having a SiO₂/alkali metal oxide ratio in the range from about 2.0 to about 3.4, and water in an amount at least adequate to wet the said condensed phosphate sufficiently to induce agglomeration and insufficient to destroy the discrete particle characteristic of the condensed phosphate-silicate mixture, agitating the mixture while keeping the temperature from rising above about 130° F., then adding chlorinated trisodium phosphate to the said mixture, agitating the resultant mixture to substantially complete hydration while intermittently agitating it and reducing the agglomerates formed to the desired size, the total amount of water added, exclusive of water introduced with the chlorinated trisodium phosphate, being from about 12% to about 25% by weight of the final detergent composition, whereby a composition characterized by resistance to caking on storage and formation of difficultly soluble gels during use is produced.

New Penick Booklet

A 40-page, illustrated booklet was recently published by the farm chemical and insecticide division of S. B. Penick & Co., 100 Church St., New York 8, which lists and describes the division's products including aerosol concentrates, allethrin, chlordane, "Dethmor," lindane, pyrethrum, and many others with their applications. Also described are the company's research, production, and laboratory facilities. Copies of the booklet may be obtained from the division.

Hodag Completes Expansion

Construction was completed last month of enlarged production, laboratory, and office facilities for Hodag Chemical Corp., Chicago. With the expansion, the company has quadrupled its plant space and tripled its laboratory space. The company's line includes antifoams, esters, emulsifiers, flocculating agents, and other surface active chemicals. Located at 7247 N. Central Park, the new facilities include stainless steel blending tanks and a sonic homogenizer for the manufacture of silicone products.



Photomicrograph shows amazing bulking power of a granule of spraydried phosphate (left) when compared with conventional form (right).

Photomicrograph shows how to add 30% more bulk to detergents with spray-dried phosphates

The phosphate on the left is spraydried. It's 70% bulkier than the conventional phosphate on the right.

Add this bulking power to your detergent and you come up with a package that's 20% to 30% larger without adding to your cost a whit.

Two spray-dried phosphates. You can get both sodium tripolyphosphate

and tetrasodium pyrophosphate from Hooker in this form. All are sold under the brand name Shea.®

The spray-dried phosphates dissolve two to three times faster than conventional forms, because of their greater surface area. They are 97% to 99% pure—highest standards anywhere.

The high air content of spray-dried

phosphates keeps them loose and freeflowing at all times.

For more information on how to improve your detergents with these products, write to the address below.

Also available in conventional density are disodium phosphate, trisodium phosphate, sodium hexametaphosphate, and sodium tripolyphosphate.

HOOKER CHEMICAL CORPORATION

PHOSPHORUS DIVISION, DEPT. SC-10

60 E. 42nd Street, New York 17, N. Y. • MUrray Hill 2-2500



Products and PROCESSES

Gibberellin in Aerosols

Since gibberellin has been found effective as a plant growth stimulant in dosages as low as five to 10 micrograms, it has been suggested for use in aerosol formulations. Using a metering valve set to release 100 milligrams of formulation, each shot containing about five micrograms of gibberellin one three-ounce aerosol container (two ounce practical fill) would be good for more than 500 applications. Gibberellin is not stable in aqueous solution. The following formulation has been suggested for pressure packaging in glass:

	Weight %
Gibberellin	0.00625
Surface active agent	0.200
S.D. alcohol #40,	
anhydrous	q.s. 50.00
Propellant	50.00

A formulation for pressure packaging in a lacquer lined metal container may have the following composition:

	Weight %
Gibberellin	0.00625
Surfactant	0.200
S.D. alcohol #40	
anhydrous	q s. 2000
Propellant	80.00

U.S.I. Chemical News, August 1959.

Test for Alkanolamines

The presence of mono-, di-, tri-, and other alkanolamines can be established, and they can be separated and individually identified by ascending paper chromatography. A mixture of isopropanol, water and concentrated ammonia in the ratio 80/18/2 serves as the mobile phase. Spots are made visible by spraying a solution of bromocresol green in ethanol. In the case of mono-alkanolamines a ninhydrin solution is used. Quantities down to 0.2 micrograms are indicated by these dyes.

The same method can be employed for the detection of fatty acid amides, provided they are previously hydrolyzed to the corresponding amines. Since alkanolamides are frequently incorporated in very small quantities in liquid and solid detergents this simple and speedy analytical method should prove useful. E. Heinerth and J. Pollerberg, Fette-Seifen-Anstrichmittel, May 1959, p. 376.

Identification of Anionics

Anionic detergents in the form of their water-insoluble barium salts can be identified by infrared absorption. The barium salts of 10 organic sulfates and sulfonates of the types commonly used in detergents were prepared. The infrared curves of these salts served as means of identification. Details of the preparation and ashing of the salts and the infrared procedure are described. The curves are correlated. J. W. Jenkins and K. O. Kellenbach, Colgate-Palmolive Co., Jersey City, N. J., in Anal. Chem., 1959, No. 31, 1056-9.

New Corrosion Inhibitor

A new liquid corrosion inhibitor was introduced recently by O'Brien Industries, Inc., P. O. Box 72, Caldwell, N. J., under the trade name "O'B-Hibit-L32". The product is intended for use with phosphoric, muriatic and other acids to prevent metal corrosion. Recommended use concentration is from two to three per cent by volume with concentrated acid. The inhibitor is said to meet military specifications for chemical cleaning and rust removal.

Detergent-Sanitizers

Substituted phenol germicides can be successfully blended into liquid anionic synthetic detergents to make efficient detergent-sanitizers, according to a technical service bulletin recently published by Monsanto Chemicals, Ltd., London, England. The British publica-

tion calls the formulations "sterilizer-detergents". Some formulations are suggested and their germicidal potency rated by the Rideal-Walker (R.W.) coefficient.

Formula I

"Cresantol 3"* mixed	isomeric	
benzyl cresols	2-3 %W/V	,
Alcohol	5-10 %W/V	•
"Teepol 530"** secon	dary	
alkyl sulfate	to 100 %	
R. W. coefficient	1-1.5	

Formula II

"Cresantol 16"* mixed iso	meric	
chlorinated xylenols	2	%W/V
Alcohol	2.5	%W/V
"Teepol 530"** secondary		
alkyl sulfate	to 100	%
R. W. coefficient	1.5-2	

^{*}Trade name of Monsanto Chemicals, Inc.

Suggested use dilution for both formulations one volume in 500 volumes of hot water for dishwashing, one in 100 for general cleansing.

New Sulfornation Agent

Liquid sulfur trioxide incorporating a newly developed stabilizer has been added to the list of sulfation and sulfonation agents currently offered by the Industrial and Biochemicals Department of E. I. du Pont de Nemours & Co., Wilmington, Del. Low purchase and freight cost per pound of active ingredients is claimed for this product.

The novel stabilizer maintains sulfur trioxide in its low melting gamma and beta forms when cooled to solidification. It can therefore be remelted at about room temperature. However, reasonable care must be exercised to keep stabilized sulfur trioxide free from moisture which may counteract the effect of the stabilizer.

Primary applications of the new product are in the manufacture of surface active agents, insecticide emulsifiers, and lubricating oil additives. Its use eliminates spent acid separation and disposal problems. Du Pont offers the new stabilized liquid sulfur trioxide in drums, tank trucks and tank cars.

^{**}Trade nameof Shell Chemicals, Ltd., England.

Correct use and handling of sulfur trioxide are covered in a six-page brochure available from du Pont's Industrial and Biochemical Department.

Sugar Surfactants Patented

A United States patent covering a process for making sugarbased surface active agents was issued recently to H. B. Hass, president of the Sugar Research Foundation, Inc., and Foster D. Snell, William C. York, and Lloyd I. Osipow, of Foster Dee Snell, Inc., New York. The inventors have assigned the patent No. 2,893,390 to the Sugar Research Foundation.

More than a quarter of a million dollars will be spent on research in the 12 months beginning July 1, 1959, by the Foundation according to Dr. Hass. One third of this budget will be devoted to studies on non-food uses. Most of these are being carried out in England, Cuba, and Canada.

New Acrylic for Polishes

A new vinyl acrylic resin latex for self polishing floor polish formulations has just been introduced by National Starch and Chemical Corp., 750 Third Avenue, New York 17. "Resyn ®2700" is a hard non film forming material. The light scattering effect of its particles imparts brilliance to the polish. It is said to yield a hard floor coating of good scuff resistance, which does not yellow upon aging.

Although polishes formulated with "Resyn *2700" can be damp-mopped and are resistant to water spotting, they can be removed easily with soap and water, according to A.G. Battaglia, manager of National's resin division. Samples and technical information on the new product are available.

New UBS Polymer

A new styrene-acrylate copolymer for floor waxes has just been introduced by UBS Chemical Co., Cambridge, Mass. "U-4001 Ubatol" is said to combine the flexibility and clarity of an acrylate with the gloss and toughness of a styrene. The new polymer is designed for incorporation in both buffable and non-buffable floor polishes.

Priced in the same range as modified polystyrenes, the new copolymer permits high-gloss formulations with lower solids content than acrylics and is compatible with commonly used waxes, resins and polymers, according to UBS. "U-4001" will be produced at the firm's new plant in Marlboro, Mass.

New Nuodex Soaps

A new line of aluminum soaps tailored to gel mineral oils of a wide viscosity range has just been introduced by Nuodex Products Co., division of Heyden Newport Chemical Corp., New York. The new soaps are identified as "Nuodex" aluminum stearate "GG-200," "GG-250," and "GG-300." Technical literature on these



Sales offices in principal cities. Quick delivery from stocked warehouses or "ready" pick-up by customer's trucks. Write, wire, phone — prices, samples gladly furnished.



What are your requirements in cleaners?

HIGH FOAM INTERMEDIATE FOAM OR VERY LOW FOAM

ROKYL SC-HIGH FOAM

High, stable foam for:

1. Liquid Dishwashing Detergents

3. Liquid Carwashing Detergent

2. Rug and Upholstery Shampoo

4. General Purpose Liquid Cleaner

5. Hair Shampoo

Can be packed in steel with no fear of corrosion. High viscosities at low concentrations — Good Detergency — Mild to skin.

Dilutions of 1 part ROKYL SC to 10 parts water give a viscous cleaner with high stable foam suitable for many diverse specialty cleaner applications.

ROTERGE 100M-INTERMEDIATE FOAM

Versatile heavy duty detergent ideally suited for floor and other hard surface cleaners.

Easy and economical to formulate — Non rusting to steel

High viscosities at low levels.

ROTERGE DC 100-VERY LOW FOAM

Heavy duty detergent for:

1. Floor scrubbing machine cleaners

Any cleaner application where high detergency and a minimum of foam are required.

Wax Strippers (including resin finishes) gency and

Non rusting steel—High viscosities at low levels—Economical to formulate.

Samples and Literature are available.



LABORATORIES, INC.

44-18 Purves Street Long Island City I, N. Y. STillwell 6-6895

ROZILDA LABORATORIES, INC.

44-18 Purves Street

Long Island City 1, N. Y.

Please send me without cost samples of products checked. Also data sheets.

Rokyl SC

Roterge 100M

Roterge DC 100

Name

Compar

Address

Address

City

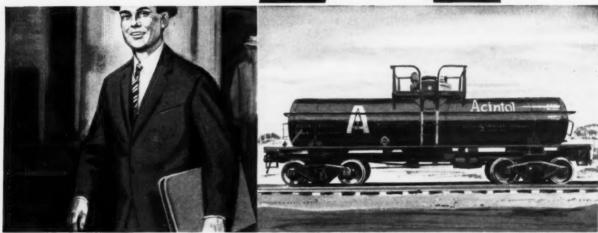
Zone State

OCTOBER, 1959

175



Tall Oil Service as You Like it!



Quick, thorough, efficient...that's Arizona service to industry. Orders are handled promptly. Delivery is swift. Our salesmen can supply you with samples for testing purposes, and printed formulations pertinent to your manufacturing processes. Our technical facilities are ready to help you in every way. Next time

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Our Arizona salesman will acquaint you with details about our newest product, FA 1 Special. This excellent tall oil fatty acid has lighter color to assure uniformly high quality derivatives.

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ARIZONA CHEMICAL COMPANY

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News...

PEOPLE · PRODUCTS · PLANTS

Robert White, Jr. Dies

White King Advances Jones

Sullivan to Boyle-Midway

John Tobin Joins Shulton

Adger S. Johnson, recently elected vicepresident of Union Carbide Corp., supervises activities of newly formed consumer products division of UCC. New division, Union Carbide Co., will market "Eveready" lines of antifreeze, automotive specialties and garden chemicals, which were marketed formerly by Carbide's National Carbon Co. Division.





Perfumer's Notes

ON A FEW VERONA SPECIALTIES

CUMIN KETONE—Has a fine floralcy, an excellent blending agent, will not discolor or irritate, and has good stability. Use up to 5%.

PARA CRESYL CAPRYLATE—Is an essential ingredient in the Jasmin Complex and a modifier in many florals. It has excellent fixative qualities.

PARA METHYL HYDRATROPIC ALDEHYDE—Is extremely powerful. It produces interesting effects in many types, and is effective in fractions of 1%.

RESEDALIA—Is an Acetal. Its merit has been well proven in actual use. As its name implies, its aroma is reminiscent of Reseda Mignonette. As a blending agent it has an harmonizing effect wherever it is employed.

FLORANOL—Is an Ester with an Apricot-Rose note. It blends well with all types of Rose ingredients.

Sole representative in the United States for J. & E. Sozio, Grasse, France.

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NATURAL ABSOLUTES

Write for our complete list of specialties and other aromatic chemicals.

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VERONA AROMATICS

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News

New Union Carbide Division

Union Carbide Corp., New York, has formed a new operating division called Union Carbide Con-



Arthur C. Bryan

sumer Products Co. in a move to expand its consumer products business, it was announced last month by Morse G. Dial, chairman and chief executive officer. Also announced were appointments of three executives including: Adger S. Johnson as a vice-president of Union Carbide; Arthur C. Bryan as president of newly formed company; and William H. Feathers as president of National Carbon Co.

New division will market Union Carbide's "Prestone" and "Eveready" lines of anti-freeze, automotive specialties, and garden chemicals which were previously handled by National Carbon Co. division.

Mr. Johnson had been presi-



William H. Feathers

dent of National Carbon since 1951. He joined Union Carbide in 1928 and now, as a vice-president, supervises consumer product activities.

Mr. Bryan, president of new division, was previously vice-president and general manager of consumer products for National Carbon. He joined Union Carbide in 1935.

Mr. Feathers had been vicepresident and general manager of industrial products for National Carbon since 1954. He has been with Union Carbide since 1937.

Cleared of Lottery Charge

Procter & Gamble Co. of Canada, Ltd., Toronto, was recently found not guilty by an Edmonton, Alberta, magistrate of charges that a consumer opinion poll it conducted constituted a lottery. The charges referred to questionnaires which the company placed inside 10,000 boxes of its products among a production run of more than 100,000 boxes. P&G offered S5 to any customer who found a questionnaire, filled it out, and returned it. Most of the questions were about washday methods and use of the firm's products. Charges were placed by Edmonton police on the request of the Alberta attorney general's office. Magistrate Walter Dupre found that "the forms were sent out in the package with a sincere desire on the part of the company to ascertain desires of the housewife with the intention of improving the product."

Colgate Names Gasser

Edward P. Gasser has been appointed a research statistician in newly created statistical planning and analysis section of corporate research and development department at Colgate-Palmolive Co., New York. This was announced last month by Joseph H. Brant, director of corporate research. Previously Mr. Gasser was with Toni Co., Chicago, division of Gillette Co., Boston, as assistant research director.

Tobin Joins Shulton

John C. Tobin has joined the toiletries division of Shulton, Inc., New York, as a product manager, it was announced recently by Richard N. Parks, vice-president-sales. In his new post Mr. Tobin plans and coordinates the marketing and merchandising program for the company's line of women's fragrance products. Previously he was with C. J. LaRoche & Co., New York advertising firm.

New Cellowax Distributors

Cellowax Co., Baltimore, manufacturers of industrial floor maintenance products, recently appointed franchised distributors for its "Pantaloon System of Floor Maintenance." The new distributors are:

Colman Supply Co., Detroit; Blain Supply Co., Roanoke, Va.; Gem Chemical Co., Orlando, Fla., Commercial Janitor Service, Chattanooga; L. H. Buck Co., Plattsburg, N. Y.; Central Products Co., Manchester, N. H.; Class Janitor Supply Co., Allentown, Pa; F. A. Waring & Co., Fall River, Mass.; and Richo Products Co., Springfield, Mass.

Also announced were the appointments of Walter H. Joyner

and Walter B. Joyner of Colonial Empire, Inc., Manchester, Conn., as manufacturer's representatives for Cellowax in the New England area.

In Boyle-Midway Post

H. Edward Sullivan was recently appointed product manager for the Boyle-Midway division of American Home Products Corp., New York. Previously with Nestle Co., White Plains, N. Y., Mr. Sullivan is in charge of sales of Boyle-Midway's "Wizard" room deodorant in his new post. dry neutralization liquid detergents

emulsion cleaners

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The building block for all sulfonate detergents...

Pilot ABS-99, dodecyl benzene sulfonic concentrate, offers amazing flexibility for your detergent formulation: for direct neutralization of carbonate or bicarbonate mixtures to give dry compounds; can be mixed with a variety of bases and solvents for oil or water dispersable products; will form low sulfate liquids and pastes of light color for all-purpose liquid detergents; will form amine sulfonates which are directly soluble in oil, alcohol and non-aqueous media.

ABS-99 is made by Pilot's unique Cold Processing and gives 14% more active ingredient than ordinary 88% pure sulfonic concentrates. Detergent products can be made more efficient and manufactured at a lower processing cost by using highly concentrated Pilot ABS-99.

Because of its high purity, ABS-99 may be kept in plain steel containers!

Write now for technical information and sample.



Cowles Appoints Moore

Gene Calvin Moore has been named representative for Cowles Chemical Co., Cleveland,



Gene C. Moore

in Colorado, New Mexico, Wyoming, southwest South Dakota, and western Nebraska, it was announced last month by W. J. Schleicher, manager of the laundry chemical department. Previously in the laundry supply business in the Denver area, Mr. Moore at one time played professional football for the Brooklyn Dodgers. He is receiving his training for Cowles with Warren Peterson, representative in the Iowa and Nebraska area. and then will be under the supervision of Pat Kack, Pacific division sales manager.

Mrs. P. R. Turnbull Dies

Mrs. Peter R. Turnbull, owner and founder of Kusiel Chemical Co., New York, died Sept. 8 following a lengthy illness. Following the death in 1911 of her first husband, Randolph Kusiel, she founded in 1913 Kusiel Chemical Co. to manufacture and market "Randu" cleaner. Earlier the Kusiels had operated the pest control firm of Kusiel Exterminating Co.

As Rose Kusiel she was founder, owner and president of Kusiel Chemical until 1957, when her second husband, Peter R. Turnbull joined the firm as president. Previously for 28 years he had been with R. Hoe & Co., New York printing press manufacturer. Mrs. Kusiel and Mr. Turnbull were mar-

ried in 1950. At the time of her death they were completing plans for a new plant in the northern section of the Bronx.

Mrs. Turnbull is survived also by two daughters by her first marriage, Mrs. John Manweiler and Mrs. Pauline Goldman, and by four grandchildren.

Plan New Monsanto Center

Plans for a new research center at the general offices of Monsanto Chemical Co. located in Creve Coeur, Mo., a suburb of St. Louis, were announced early last month by Charles A. Thomas, president. The new center will consist of several buildings occupying about 400,000 square feet. Two laboratories, a library, and supporting facilities will be included. Scheduled for completion in 1961, the center will house only laboratory and similar facilities. No manufacturing or industrial activity will be involved.

Mr. Thomas also announced the appointment of Wendell P. Metzner as administrative director of the new research center. Previously associate director of research for the company's organic chemicals division, Dr. Metzner will direct all supporting activities and services of the center. His appointment became effective last month. Dr. Metzner has been with Monsanto since 1936.

Calgon Advances Three

Three advancements in the household sales division of Calgon Co. division of Hagan Chemicals & Controls, Inc., Pittsburgh, were announced recently by J. C. Weithaus, vice-president. John C. Rowles has been appointed new product manager and is in charge of testing and test marketing all new consumer products sold through supermarkets, department stores, and other retail outlets. Formerly administrative assistant. Mr. Rowles is succeeded by John Z. Wilson, former office manager. Walter W. Kress has been named office manager for the division, replacing Mr. Wilson.

White King Advances Jones

Edward Jones, who was recently named field sales manager for White King Soap Co., Los



Edward Jones

Angeles, (see Soap and Chemical Specialties, May 1959, p. 236), has been advanced to general sales manager of the grocery products division, it was announced last month by William Jay, executive vice-president. In his former position, Mr. Jones worked with district sales managers throughout 11 western states.

Bandman to Lehn & Fink

Donald A. Bandman has been named assistant brand manager for Lehn and Fink Products Corp., New York, it was announced last month by Edgar A. Nelson, Lehn and Fink division manager. In his new position, Mr. Bandman assists Victor A. Pizzolato, brand manager, in supervising distribution, marketing, advertising, and promotion for "Lysol" disinfectant. Previously he was an assistant brand manager for Procter & Gamble Co., Cincinnati.

First Breck Premium

The first and only consumer premium ever offered by John H. Breck, Inc., Springfield, Mass., went on sale last month in special promotion scheduled to last until Dec. 31. The premium is a Radio Corp. of America record album with a retail value of \$4.98, which is available for \$1.25 plus a Breck box top or label.



New building in Chicago acquired by Clintwood Chemical Co.

New Building for Clintwood

Manufacture of surfactants and fine chemicals began early last month in a new 25,000 square foot building recently acquired by Clintwood Chemical Co. in Chicago. Among the facilities at the new plant are glass lined reactors, indoor storage tanks to handle tank car shipments of raw materials, and an elevated temperature room for melting drum quantities of solid materials. Since 1950 Clintwood has been manufacturing alkanolamides and polyoxyethylene esters for use in industrial cleansers, textile scouring agents, and cosmetics, and as foaming and emulsifying agents. The company plans to expand the number of its products in these lines under the tradename "Sandrol."

— * — Onyskow Joins D&O Sαles

Edward Onyskow joined the sales staff of Dodge & Olcott, Inc., New York, last month. With the company since 1953, he was first an analytical chemist and later a research chemist in the research division. While in the latter post Mr. Onyskow added the duties of sales correspondent.

Allied Names Seigle

L. W. Seigle was named assistant to the director of chemical sales last month for the National Aniline Division of Allied Chemical Corp., New York. With Allied since 1939, Dr. Seigle is concerned

with product and market development in his new post. He is responsible for liaison with research and development and, in conjunction with the market research department, determines how and when new products will be introduced to commercial markets.

Velsicol Names Rep.

R. Paul Suckling has been appointed sales and technical service representative in Canada for Velsicol International Corp., C. A., Chicago, supplier of insecticides and other agricultural and industrial chemicals. His territory includes all of Canada and he maintains headquarters at 3660 Peel St., Montreal, Ouebec. Mr. Suckling, a native of England, came to Canada in 1953 and later joined McColl Frontenac Oil Co., Ltd., Montreal. where he served as assistant to the advertising and sales promotion manager.

R. Paul Suckling



Soapers Top TV Spenders

Procter & Gamble Co., Cincinnati, led in 1959's second quarter as top network television advertiser with expenditures of \$14,-067,431, according to figures released recently by the Television Bureau of Advertising, Inc., New York. Lever Brothers Co., New York, followed with \$8,493,654 and American Home Products Corp., New York, with \$6,755,167. Among leading brands advertised on network television during the period, P & G's "Tide" was in third place with an expenditure of \$1,925,987.

Avon to Split Stock

A three-for-one split of its common stock through distribution of two new shares for each share held on Oct. 26 was announced last month by Avon Products. Inc., New York. Stockholders will meet on Oct. 21 to vote on increasing the number of authorized common shares to 10,800,000 from 3,600,000. According to Avon's directors no stock dividend is planned for this year in view of split. New cash dividend rate on split shares will be fixed at a board meeting next month. Avon has been paying 40 cents per share quarterly.

New Day Laboratory

Facilities and equipment in the recently expanded customer service laboratory at J. H. Day Co., division of Cleveland Automatic Machine Co., Cincinnati, are described in a new four-page bulletin. Illustrated are many small models of blenders, mixers, mills, and sifters which duplicate for experimental and test work larger production models. Available from Day at 4932 Beech St., Cincinnati 12.

Allied Names Williams

Edwin M. Williams was appointed sales representative last month in Greensboro, N. C., area for National Aniline Division of Allied Chemical Corp., New York. With the division since 1946, he had served with its Atlanta branch for past five years.

Realignment at U. S. Borax

A realignment of its top management structure was implemented last month by United



J. F. Corkill

States Borax & Chemical Corp., Los Angeles, with the establishment of five functional departments to replace a divisional organization based on product lines. The new corporate structure, according to James M. Gerstley, president, includes five vice-presidents who will serve under Hugo Riemer, executive vice-president. In charge of industrial and agricultural marketing is J. F. Corkill, formerly vice-president and general manager of the Pacific Coast Borax division.

D. V. Parker continues in charge of 20 Mule Team Products marketing. The other vice-presidents are: R. T. Edgar, in charge of



D. V. Parker

production of all company products; R. F. Steel, treasurer and head of the administrative department; and D. S. Taylor, head of the technical department.

Following the realignment, Mr. Gerstley announced the resignation of Dean R. Gidney as vice-president and general manager of the U.S. Potash Co. division. Under the reorganization the sales of both borax and potash become the responsibility of Mr. Corkill as marketing vice-president.

Robt. White, Jr. Dies

Robert C. White, Jr. died September 8 at his home in Wyndmoor, near Philadelphia. He was general manager of the Robert C. White Chemical Co., manufacturers of insecticides and other chemical specialties. He was 49 years old and the son of Robert C. White, former president of the Chemical Specialties Manufacturers Association and former controller of the City of Philadelphia. Mr. White, Jr. was also a former member of the board of the Chemical Specialties Manufacturers Assn.

Robert White, Jr. was a graduate of the Wenonah Military Academy and the Philadelphia College of Pharmacy, Class of 1932. He served as a lieutenant in the Navy during World War II. He was associated with his father in the chemical company for the better part of the past 25 years. Interment is at the West Laurel Hill Cemetary near Philadelphia. He was unmarried and is survived by his father.

Robert C. White, Jr.



CSMA Approves Labeling

The board of governors of the Chemical Specialties Manufacturers Association, New York, recently approved a resolution adopted by the Association's Precautionary Labeling Committee on the wording for ethylene glycol base anti-freeze labels. The recommended wording is: "Warning: Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. If swallowed, induce vomiting immediately. Call a physician. Ethylene glycol base. Do not store in open or unlabeled containers. Keep out of reach of children."

As recommended by the association, the statement should appear prominently in legible, conspicuous type in contrast to other matter on the label.

Purex Declares Dividend

Purex Corp., Ltd., South Gate, Calif., paid a quarterly dividend of 17.5 cents and a stock dividend of four per cent on common stock on Sept. 30 to stockholders of record on Sept. 8. Purex paid 15 cents in June, following a 100 per cent stock dividend in March. Purex also announced the election of Charles E. LaRoche, president, and William J. La-Roche, executive vice-president of Franklin Research Co., Philadelphia, as vice-presidents. Franklin was acquired by Purex earlier this year and is now operated as a subsidiary firm.

Chamber Honors Breck

John H. Breck, Inc., Spring-field, Mass., and its chief executives were honored recently at a break-fast meeting of the Springfield Chamber of Commerce upon completion of the company's 50 years of business in the hair care field. More than 350 people attended. John H. Breck, founder and board chairman; Edward J. Breck, president; John H. Breck, Jr., executive vice-president; and M. Constance Breck, treasurer, received special recognition from Stephen A. Moynahan, chief greeter.

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Emulsions made with triethanolamine soaps are ideal bases for cosmetic creams, lotions, and pharmaceuticals. Since their water solutions are essentially neutral, amine soaps don't injure skin or fabrics. Such preparations have an attractive texture and body . . . give a pleasant feel to face and hands. And they are easily removed with water or tissues.

CARBIDE's triethanolamine, mixed with fatty acids to form amine soaps, gives emulsions the consistency of petrolatum. Its solutions in water show marked detergent properties, useful in shampoos and in cleansing and vanishing creams. Brushless shaving creams with good softening, wetting and lubricating action are easily formulated with these bases. Pharmaceutical emulsions for external use can be efficiently prepared with triethanolamine and isopropanolamine as the starting point.

Shipments of Carbide's triethanolamine are made in 55-gallon drums, LCL or carload lots; you can save by ordering in combination with other Carbide products. Ask a Technical Representative in any Carbide office for information on possible savings through choice of shipment's size.

Starting formulas for a variety of cosmetic products are included in the 100-page book, "Emulsions and Detergents." In addition, you'll want a copy of "Alkanolamines and Derivatives," containing information on applications and properties of Carbide ethanolamines. For a copy of each book, write Dept. H, Union Carbide Chemicals Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N.Y.

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DIVISION OF



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Johnson Reorganizes Products Division

REORGANIZATION of service products division of S. C. Johnson & Son, Inc., Racine, Wis., was announced last month by S. C. Johnson, division vice-president. Two new departments, one for sales and the other for market development, have been created in the division. The former will be headed by E. J. Grant as manager and George L. Boehm has been named manager of market development department. In his new post Mr. Grant directs sales of all maintenance, metalworking, and special industrial coating products. He formerly was maintenance products sales manager. Mr. Boehm was previously industrial products department manager. The new department he now heads develops marketing plans, provides technical assistance to the sales force, and participates in the development of new and improved products.

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Field sales force appointments as service products district managers include: R. A. Smyth, northeast; R. H. Eggers, Middle Atlantic; T. L. Fitzgerald, southeast; M. H. Hensath, East Central; W. H. Kilpatrick, West Central;

C. F. Donnell, western; W. W. Cooper, southwest; and T. W. Werden, Pacific.

J. W. Barrett, Jr., has been appointed service products national accounts manager. Formerly maintenance products department manager, he is now concerned with the development of programs for increasing business with national companies and the preparation of bids for government orders.

Also announced were three appointments to the newly created posts of market development supervisors. They are: Peter D. Grane, maintenance products; Robert L. Paap, agricultural and furniture waxes; and John C. Lindblad, special industrial coatings.

GAF to Improve Plant

Because of increasing demand for polyvinylpyrrolidone (PVP) and various intermediates required in its synthesis, dyestuff and chemical division of General Aniline & Film Corp., New York, has decided to reengineer its acetylene derivatives plant at Calvert City, Ky. Certain special units at

the plant will be modified in design through incorporation of recent technological advances. Construction has been scheduled to avoid interference with production. The original plant, completed three years ago, was first plant for full-scale commercial production of high-pressure acetylene chemicals built in the United States, according to GAF.

Armalite Builds Plant

Armalite Co., manufacturer and supplier of chemicals, equipment, and processes to metal finishing industries, expects to complete construction of a new 30,000 square foot plant in suburban Toronto by the middle of this month. Among products to be manufactured at the new facility are alkali cleaners and buffing and polishing compounds. Laboratories and offices are also included in the plant construction.

Harry Ludlam Dies

Harry A. Ludlam, 72, retired sales manager of Lever Brothers Co., New York, died Sept. 5 at Brightwaters, N. Y. He had been with Lever for 30 years and retired in 1952.

William Russell, second from right, display manager for Demery's Inc., Detroit department store, receives \$1,000 first prize in the Old Spice Father's Day Display Contest sponsored by Shulton, Inc., Clifton, N. J. Mr. Russell competed in the contest's first category for department stores in cities of 220,000 population or more, and his prize-winning window is shown

at right. Presenting the award is James Luse, Shulton sales representative, as James Murphy, left. Shulton national sales manager, and Charles A. Peck, president of Demery's, look on. Other categories in the contest, which was for illustration of the theme, "Bring Dad's Ship In . . . Give Him Old Spice," were for chain and independent drug stores,





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White King Names Hunt

James E. Hunt has been advanced to division sales manager in northern California for White



James E. Hunt

King Soap Co., Los Angeles, it was announced recently by Ed Jones. general sales manager of the grocery products division. Most recently division manager in San Francisco, Mr. Hunt has been with company since 1950.

Additional responsibility for Don L. Reed, market development manager, for post exchange, commissary, and military reservation sales in southern California, was announced by William Jay, executive vice-president. Mr. Reed joined White King last year and was previously with E. W. Reynolds Co., Los Angeles.

NACA to Meet Oct. 21-23

The National Agricultural Chemicals Association will hold its 26th annual meeting at the French Lick-Sheraton Hotel, French Lick. Ind., on Oct. 21-23. Featured speaker at the meeting will be Senator Everett M. Dirksen of Illinois who will address NAC members at a luncheon on Oct. 22.

Highlights of the program on Wednesday, Oct. 21, include an address by Jackson V. Vernon, Food Machinery and Chemical Corp., New York, president of NACA. Two reports also will be heard, one on "Sales and Marketing of Pesticides" by Robert S. Thompson, Thompson-Hayward Chemical Co.,

Kansas City, Mo., and another on "Advertising and Promotion of Pesticides" by L. F. Czufin, California Spray Chemical Corp., Richmond, Calif. A panel discussion on "Wildlife" with J. Dreessen of NACA as moderator will include W. W. Dykstra, U.S.D.A. Fish and Wildlife Service; Clarence H. Hoffman, U.S.D.A.; Charles Lincoln, University of Arkansas; and a representative of a national wildlife conservation group.

Association committee meetings will be held on Thursday, Oct. 22. The next day, Charles H. Sommer, Monsanto Chemical Co., St. Louis, will preside at the morning sessions and will introduce the newly elected president. Reports also will be heard from the NACA staff and committee chairmen. meeting will conclude with a report by Herbert L. Haller of the Agricultural Research Service, U.S.D.A., on "World Pest Control Developments" and a presentation by J. A. Noone, NACA, and Justus Ward, U.S.D.A., on "H.R. 6436-How it Affects the Industry."

Jefferson Appoints Three

Three appointments to the sales staff of Jefferson Chemical Co., Houston, Tex., were announced last month by R. E. Werley, Jr., sales manager. New sales representatives and regional sales offices to which they are assigned are: Douglas M. Stuart, Cleveland; Gerald B. McLeod, Houston, Tex.; and Peter S. Vail, Chicago. Both Mr. Stuart and Mr. McLeod had been associated with E. I. du Pont de Nemours & Co., Wilmington, Del., and Mr. Vail was previously with Celanese Corp. of America in Chicago.

Edwin Sellmer Dies

Edwin O. Sellmer, 73, son of Julius J. Sellmer, founder of the old Crystal Soap Co., Milwaukee, Wis., died July 27 in Napa, Calif. Before he retired six years ago, he was in charge of the office at the veterans' home in Napa. Crystal Soap Co. was later merged with Colgate-Palmolive Co., New York.

Conoco Advances Morse

Harold H. Morse was recently appointed sales service representative for the petrochemical



Harold H. Morse

department of Continental Oil Co., Houston, Tex. Formerly quality control representative at the company's petrochemical plant at Gretna, La., near New Orleans, Mr. Morse now makes his headquarters in Englewood, N. J. He has been with Continental since 1956 when the firm purchased Sherwood Refining Co. of Englewood, with which Mr. Morse was associated since 1939.

Eastern ESA to Meet

The 31st annual meeting of the Eastern Branch, Entomological Society of America will be held Oct. 29 and 30 at the Hotel Chalfonte-Haddon Hall, Atlantic City, N. J. Among the featured speakers are Herbert L. Haller of the Agricultural Research Service, Department of Agriculture, who will talk on his recent visit to the Soviet Union with an agricultural observation team. A. W. A. Brown, University of Western Ontario, will discuss resistance to insecticides; and E. F. Knipling, U.S.D.A., will outline recent advances in pest control. Other speakers are: Ordway Starnes, Rutgers University, New Brunswick, N. J.; P. W. Oman, ESA president; Paul Mayfield, Hercules Powder Co., Wilmington, Del.; and Ralph Neiswander, Ohio Agricultural Experiment Station.



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PFW Honors Hoeienbos

Leendert Hoejenbos, managing director of Polak's Frutal Works, N.V., Amersfoort, Holland, associated company of Polak's Frutal Works, Inc., Middletown, N. Y., recently celebrated his 40th year with the company. To observe this anniversary, his associates tendered him a dinner, on which occasion Jacob Polak, one of the co-founders and chairman of the board, presented him with a pair of antique silver chalices. Personal gifts from many friends were also presented and testimonials were given by J. E. Meihuizen, co-director of the Amersfoort firm and R. de Kat, managing director Soflor, Ltd., Perivale, England, one of PFW's associated companies. Mr. de Kat celebrated his 40th anniversary with the company earlier this year.

In 1931, when Henry Polak, brother of Jacob Polak and cofounder of the company, died, Mr. Hoejenbos was called upon to take over the technical management of the firm. In 1940, at the outbreak

William W. Huisking, Chas. L. Huisking Co., New York, was elected president of the Drug, Chemical & Allied Trades Assn., at its annual meeting at Lake George N. Y., on Sept. 18. He succeeds Ralph A. Clark. At the meeting the association changed its name from "Section" to "Association." Other officers elected include: James Day, Dow Chemical Co., treasurer; Wm. J. Schieffelin, III, Schieffelin & Co., treasurer, and Helen L. Booth, executive secretary, William J. Quinn of Merck & Co., was named counsel.

During the meeting, D. J. O'Connell, Howe & French, Inc., Boston, won the first leg on the DCAT golf trophy. The trophy must be won three times for

permanent possession.





Miss Catherine L. O'Brien, president of Stanley Home Products Co., Westfield, Mass., expresses gratitude of Stanley for gift of replica of the Mexican National symbol, "The Angel of Independence." (left). Golden statue was presented to Stanley Home Products, Inc., by dealers of its subsidiary, Stanhome de Mexico, located in Mexico City, Statue, which stands in Stanley Park in Westfield, was dedicated by Manuel Aguilar, Consul-General of Mexico in New York City, Robert F. Lally, general manager of Stanley's international division, introduced Mr. Aguilar.

of World War II, when the Polak family left for the United States, he assumed overall management of the company.

Union Carbide Promotion

Union Carbide Chemicals Co., New York, recently sent out a mailer to promote the "personalized service offered with 'Ucon' propellants." The piece consisted of a two-color folder with a bogus bill for "10,000 smackers" clipped to it with a simulated gold money clip engraved 'Ucon Brand Propellants."

Open Branch Office

Kenny-Ritchie Co., manufacturers of a water repellent and rust preventive, recently opened a branch office in Parkersburg, W. Va. According to W. R. Ritchie, president, the company may later build a manufacturing plant in that area.

Norda Appoints Rowse

Fred J. Rowse has been appointed vice-president of Norda Essential Oil and Chemical Co., New York, it was announced last month by Hermann J. Kohl, board chairman and president. Most recently sales manager, Mr. Rowse has been associated with the company for the past 21 years.

Fred J. Rowse







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EMCOL MAS-opacifiers

EMCOL 61 - hair conditioners

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EMCOL PS-50 - propylene glycol monostearates

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Hooker Shifts Mattison

Stanley A. Mattison has been appointed manager in Washington, D. C., for Hooker Chemical Corp., Niagara Falls, N. Y., it was announced recently by Robert E. Wilkin, senior vice-president. Mr. Mattison provides direct liaison between government agencies and Hooker in all areas of company business. Previously product supervisor, trichlorethylene sales, since Hooker's merger with Niagara Alkali Co. in 1956, he had been with Niagara Alkali since 1946.

CIBS Nominating Committee

CIBS recently elected the following as members of its nominating committee: Harold Anderson, H. Kohnstamm & Co.; Lee Simmons, Imco Container Corp.; David Warner, Fleuroma, Inc.; William Jaeger, Park & Tilford Co.; Donald Aitcheson, Daggett & Ramsdell, Inc.; Gene Moore, Richford Corp.; Robert Williams, Avon Products, Inc.; and Joseph Edger (alternate member), Augusta Products Co.

New Wyandotte Products

Two new products designed for commercial dishwashing were introduced recently by J. B. Ford division of Wyandotte Chemicals Corp., Wyandotte, Mich. One is "Wyandotte U. L. C.," a concentrated liquid cleaner designed to cut grease, penetrate and remove heavy soil and dried-on foods. The other product is a proportioner for the liquid cleaner. Called the

"Uni-Feeder," the unit is pre-set to feed a metered "U. L. C." mixture. Designed to fit any faucet, "Uni-Feeder" has an instantaneous feed, a positive cut-off, and is tamperproof.

New Mantrose Offices

Mantrose Corp., importers, bleachers and manufacturers of shellac, moved into new executive offices early this month at 99 Park Ave., New York 16. New telephone number is Murray Hill 7-2762. Previously the firm was located at 1 Hanson Place, Brooklyn.

IF&F Combines HQ's

The consolidation of its domestic headquarters for "Alva" and "P&S" flavors at its Elizabeth, N. J., location was announced recently by International Flavors & Fragrances, Inc., New York. The company's flavor manufacturing operations continue at Teterboro and Union Beach, N. J., as well as Elizabeth. According to Charles P. Walker, president, the consolidation is expected to improve operating efficiency and provide better customer service. IF&F was formed early this year through the merger of van Ameringen-Haebler, New York, and Polak & Schwarz of the Netherlands.

The company also announced a new label for its flavor materials but emphasized that label designations and numbers for both "Alya" and "P&S" flavors continue unchanged.

Colgate Research Center

Plans for the establishment of a center for basic and applied research adjacent to the science campus of Rutgers University, New Brunswick, N. J., were announced last month by Colgate-Palmolive Co., New York. The 200,000 square foot facility will be built on a 75 acre tract purchased from Rutgers in the University Heights area overlooking the Raritan River. Ground will be broken in about eight months and the two story center is scheduled for completion by late 1961. It will have a glass, ceramic, and aluminum exterior with a frontage of 360 feet. Two main laboratory wings will project from the rear of the building and three smaller wings in the front will be occupied by the administrative sections, an information center with a library and seminar room, and a cafeteria. When completed the research center will house the company's biological and dental groups and many other research sections.

John R. Brown, Jr., vicepresident of research and development, pointed out that Rutgers and Colgate have had a close relationship in a number of fundamental research programs. He also noted there is a mutually beneficial interchange of ideas and information between the University's scientists and the staff members of Colgate's laboratory for dental medicine research and biological research laboratories already located at Rutgers.

Architect's drawing of proposed Colgate-Palmolive research center in New Brunswick, N. J.



Victor Expands Plant

Construction began recently on the expansion of production facilities at the phosphorus furnace plant in Mount Pleasant, Tenn., of Victor Chemical Works, Chicago, producer of phosphorus and phosphate chemicals. The first part of the two stage project consists of a large rotary kiln for nodulizing phosphate rock in preparation of

feed for the electric furnaces; coolers; conveyors; and scrubbing towers. The second part consists of an electric furnace for smelting the phosphate rock and recovering elemental phosphorus. The phosphorus produced at the new facilities will be converted at the company's other plants into phosphorus chemicals used in household and

industrial chemical specialties.

textile chemicals surfactants cosmetics MATHIESON **Polyethylene Glycols** plasticizer pharmaceuticals

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Dow Surfactants Section

A surfactants section keved to the interests of the soap and detergent industry was established re-



Marvin E. Winquist

cently in the technical service and development departments of Dow Chemical Co., Midland, Mich. Marvin E. Winguist has been named head of the new section which is responsible for the development of the "Dowfax" line of surfactants and for technical liaison with the industry. Mr. Winquist has been working in the surfactants area since joining Dow in 1955.

Dow Brand Anti-Freeze

Dow Chemical Co., Midland, Mich., plans to introduce its own brand anti-freeze in test market areas this fall. Said to be specially formulated by the Dow automotive chemicals laboratories for high detergency action to combat rust and corrosion, the new product marks the company's first entrance into the anti-freeze field with a national brand of its own. Since 1952 Dow has been a major private label supplier to oil and automotive companies and has supplied ethylene glycol to the anti-freeze trade for over 20 years.

Maddex Joins U. S. Borax

Phillip T. Maddex recently joined United States Borax & Chemical Corp., Los Angeles, as chief engineer. He was formerly with Titanium Metals Corp. of America, New York.



PINE OIL SMELLS C CLEANS CLEAN



Today pine oil is one of the most important raw materials used in the manufacture of liquid detergents, soaps, laundry aids, general cleaners, disinfectants, and deodorants. There are two good reasons for this acceptance.

PINE OIL SMELLS CLEAN - It provides the end product with a smell as fresh and reassuring as a pine forest.

PINE OIL CLEANS CLEAN-Pine oil does more than

impart odor. It has definite chemical properties as a wetting agent and solvent to actually assist the other components of a cleaning agent in cutting grease. And it has high bactericidal qualities as well.

To keep pace with the expanding demand for pine oil, Hercules and other producers have steadily increased their output and plan still more capacity for 1960.

Pine Chemicals Division Naval Stores Department



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OCTOBER, 1959

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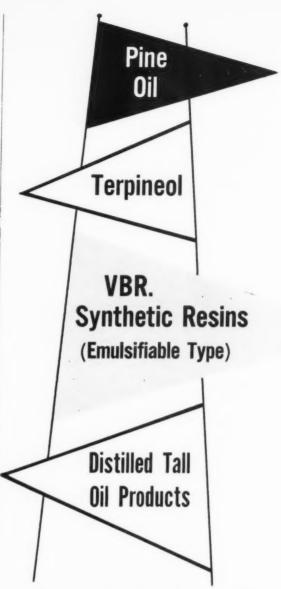
Versatile Odrenes...of many specific odor types...are skillfully compounded to help sell waxes, cleansers, polishes, detergents and specialty items of all kinds. Panel tests prove Odrene acceptance...and pleasant scents pay off in customer satisfaction.

This combination of just-right fragrance and good performance means high-voltage sales appeal. Consult Sindar for samples and specialized service.

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SOAP and CHEMICAL SPECIALTIES

Premium Show in N.Y.C.

Nearly 350 manufacturers of premium merchandise displayed their products at the New York Premium Show held Sept. 14-17 at the Hotel Astor. The show was sponsored by the Premium Advertising Association of America. Highlight of the show was the Premium Advertising Conference on Sept. 15 at which Gordon C. Bowen, PAAA president, presided. Speakers were Janet Wolff, vice-president and senior copy group head at J. Walter Thompson Co., New York, on "Today's Women and Premiums;" Herman F. Steele of Florida Citrus Industry on "Grapefruit-Premium Born with a Silver Spoon;" and Earl Nightingale on "The Strangest Secret in the World." A film produced by General Foods Corp., White Plains, N. Y., titled "What Goes on in a Woman's Mind?" was also featured at the Conference.

Texize Opens New Plant

Ceremonies in Palestine, Tex., last month formally opened a new plant operated there by Texize Chemicals, Inc., Greenville, S. G., for the manufacture of household cleansers. Participating in the opening were Gov. Ernest C. Hollings of South Carolina, Gov. Price Daniel of Texas, former baseball star Joe DiMaggio, and Texize officials. The plant, in operation for about two months prior to the formal opening, supplies Texize cleansers throughout the area west of Palestine.

Armour Advances Three

Three division general managers were elected recently as vicepresidents of Armour and Co., Chicago. They are J. M. Hoerner, grocery products division; C. B. Johnson, in charge of Armour Alliance Industries; and M. E. Lewis, head of Armour Industrial Chemical Co.

Mr. Hoerner joined the company in 1953 as director of sales and purchases for the chemical division. He became general manager of the division two years later and moved to the soap division in 1955. When the grocery products division was formed early this year, with the merger of the soap and canned meats divisions, he was named general manager.

Mr. Johnson has been with Armour since 1949 and was appointed to his present position last February. With the company since 1934, Mr. Lewis became general manager of the chemical division in 1957. This division was merged with the ammonia division last June to form Armour Industrial Chemicals Co.

Process Elects Officers

The board of directors of Process Chemicals Co., Santa Fe Springs, Calif., elected officers at a recent shareholders meeting. Reelected were H. B. Russell as president and Mrs. Riva E. Katzman as vice-president. Newly elected vice-presidents are: Conrad J. Gaiser, sales and marketing; Oscar L. Scherr, product research and development; Tor K. Pedersen, production; and Mrs. Jimmie J. Hauser, assistant treasurer.

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Breck Hair Care Survey

Results of the 12th annual hair care survey conducted by John H. Breck, Inc., Springfield, Mass., were recently announced. Said to be made up of a statistically balanced cross section of American women, the survey showed that four out of five women described themselves as having one or more hair problems. The survey was conducted by Breck among 4,000 subscribers to a national magazine for women. 2,989 women replied, for a return of nearly 75 per cent.

In the survey the company sought to learn about the average woman's hair — its styling, length, color, and hair problems, and also about visits to beauty shops, their frequency, how much was spent there, what items were bought, number of permanents and hair coloring treatments, and preference for evening appointments.

Highlights of the survey revealed that of the total number of women who went to a beauty shop during the past year, 69 per cent bought hair shampoo. Eighty per cent of those queried visited a beauty shop at least once during the past year, which was a slight gain over the 77 per cent reported in the Breck survey last year. A rise was also shown for the number visiting a shop once or more during a three months period. The survey also showed a continued decline in the popularity of home permanents with 27 per cent of those interviewed reporting their use in 1958, compared with 33 per cent in 1957.

Rooto Names Salasky

Arlin J. Salasky was appointed Great Lakes district sales manager last month for Rooto Corp., Detroit, manufacturers of septic tank and drain cleaners, garbage disposal cleaners, and root destroyers. Formerly with Economics Laboratory, Inc., St. Paul, Minn., Mr. Salasky now makes his headquarters in Detroit and covers the Michigan, Ohio, Indiana, and Kentucky territory.

Carbide Appoints Five

Union Carbide Chemicals Co., New York, recently announced five appointments in its sales department. Two of the appointments involve transfers of technical representatives. They are Arthur A. Boucher to the New York district from Buffalo, N. Y., and Malcolm H. Mackay to the Buffalo district from Newark, N. J. Three others have been named technical sales representatives upon completion of the firm's sales training program. They are: William R. Britton, Moorestown, N. J., district; Donald M. Sullivan, Cleveland district; and Frank S. Wimer, Newark, N. J., district.

Colgate Leases Space

The Cleveland district sales group of Colgate-Palmolive Co., New York, recently leased a section of the ninth floor of the new East Ohio Building in Cleveland. The space will be used for the group's office facilities.



"SANITARY CHEMICALS"

by Leonard Schwarcz

576 PAGES

This is the standard edition of Schwarcz' 576 page book, including in plain understandable language the facts about (1) bacteria and disease, (2) principles of disinfection, (3) disinfectants, (4) deodorants, (5) man versus insects, (6) household and industrial insecticides, (7) floor waxes and floor care, (8) rodenticides, (9) detergents and cleaners, (10) government regulations.

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Sodergreen to Uncle Sam

Axel L. Sodergreen joined Uncle Sam Chemical Co., New York, August 3, it was announced



Axel L. Sodergreen

by Herman Schwartz, president. Mr. Sodergreen is in charge of Uncle Sam's chemical laboratory, directing research and development of new products as well as reformulation of chemical specialties now being sold under private label by Uncle Sam. He will also be in charge of the firm's control laboratory, and will be available for consultation on manufacturing problems.

Earlier this year Mr. Sodergreen joined Oil Specialties and Refining Co., Brooklyn, as technical adviser for laboratory, manufacturing and sales. Previously he had been with Zoe Chemical Co., Queens Village, N. Y.

At one time Mr. Sodergreen was director of production, control and research for West Chemical Products, Inc., Long Island City, N. Y.

He is a chemical engineer by profession and has specialized in production control, standardization, and research and development for soaps, detergents, floor waxes, disinfectants, and insecticides.

---- Texize Appoints Dodson

B. J. Dodson has been named assistant manager of the consumer products division of Texize Chemicals, Inc., Greenville, S. C., it was announced last month by W. J. Greer, president. Previously Mr. Dodson was manager of operations for the southwest and managed the company's recently completed plant in Palestine, Tex. In his new position he makes his headquarters in Greenville. Prior to his assignment in the southwest, Mr. Dodson was manager of marketing services. He has been with Texize since 1952 and was formerly with Scott Paper Co., Chester, Pa.

Bon Ami Loss Increases

Net loss of Bon Ami Co., New York, and its subsidiaries for the first six months of this year amounted to \$195,344. For the corresponding period in 1958 the net loss was \$132,804.

The company recently announced that it signed a \$I million contract with the National Broadcasting Co., New York, for a 52 week participation on the night time Jack Paar show.



Polyvinyl Opens Office

Polyvinyl Chemicals, Inc., Peabody, Mass., recently opened sales offices at 274 Madison Ave., New York 16, which will serve the greater New York area. Joseph E. Conklin, formerly with Antara Chemicals Division, General Aniline & Film Corp., New York, has been appointed manager of new office.

Article on "Lestoil"

A feature story in a recent issue of "Television Magazine" titled "Togetherness, Inc.: The Barowskys of Holyoke" describes Adell Chemical Co., Holyoke, Mass., its leading product, "Lestoil," and the Barowsky family owner of the company. Although the emphasis of the article concerns the company's television advertising methods, the story traces the firm's development to its present size of \$40 million in annual sales. Adell is headed by Jacob L. Barowsky as president. Other of-



Ralph M. Knight was recently appointed to the newly created post of vice-president of U. S. Industrial Chemicals Co. New York. He is now concerned with the company's polyolefin development program and continues to direct its polymer service laboratory.

ficers of the firm are Isaac L. Eskanasy, Mr. Barowsky's son-in-law, executive vice-president, and Mrs. Barowsky, secretary. Also active in the company are the Barowskys' other son-in-law, two daughters, and a daughter-in-law.

Mennen Appoints Allardyce

Arch Allardyce has been named professional services manager for Mennen Co., Morristown, N. J., it was announced last month by Jack Doran, marketing director. Formerly central regional sales manager in Chicago, Mr. Allardyce now makes his headquarters in Morristown. He replaces C. Van Vliet, who has retired but continues with the company as a consultant. Also announced was the appointment of Jack Gold as market research manager. He was previously with J. Walter Thompson Co., New York advertising agency.

Central Chemical Plant

Construction recently began on a 15,000 square foot manufacturing plant and office building for Central Chemical Co., Kansas City, Mo., manufacturers of surgical soaps, waxes, cleaners, and germicides. The new facilities are located in the Fairfax Industrial District, Kansas City, Kans.

New book on Aerosols . . . "PRESSURIZED PACKAGING" (AEROSOLS)

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19 Chapters . . . 411 Pages

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Contains chapters covering propellants, filling techniques, laboratory testing, dispenser components, and 13 chapters on formulation of cosmetics, perfumes, foods, hair preparations, foam preparations, insecticides, space deodorants, medicinal preparations, paints, varnishes and removers, fire extinguishers, and a general formulary of aerosol products. Profusely illustrated. Index of aerosol trade names and glossary of terms. Compiled by two outstanding British authorities. The first complete work on aerosols yet to be published.

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TGMA Elects McCallum

F. R. McCallum of 303 Chemical Co. was elected president of the Toilet Goods Manufacturers Association of Canada at its recently held 32nd annual meeting. Other officers elected include: J. L. Stampleman, Gillette of Canada, immediate past president; G. C. Savage, J. B. Williams Co., first vice-president; J. M. Shaw, Noxzema 'Chemical Co. of Canada, second vice-president; K. J. Eccles, Roy C. Lewis, Ltd., third vicepresident; F. R. McBrien, Bristol-Myers Co. of Canada, honorary treasurer; and E. A. Phillips, Parfumeries de Paris Limitee, honorary secretary.

Surfactants on Skin

(From Page 55)

metic materials applied to the skin is not a major problem for the industry, Dr. Snyder declared. However, it is an aspect of the safety evaluation program which cannot be ignored, especially in view of current trends toward incorporation of biologically active compounds into many personal products, he said.

In order for a material to exhibit percutaneous toxicity it must be able to penetrate the skin sufficiently to reach the general circulation and must be inherently toxic toward the organism. Since neither of these properties is likely to be an "all-or-nothing" phenomenon, the quantitative aspects of percutaneous toxicity evaluations are very important, according to Dr. Snyder.

In any evaluation the area of exposure, its duration and the use concentration must be considered, as well as frequency of exposure and quantities of product in relation to body weight. In many instances the medium is important. To illustrate the importance of these factors Dr. Snyder mentioned boric acid and the mercaptans, both widely and safely used in personal products, both are suspected of being toxicants

under certain types of conditions.

Among agents which have been tested and found non-toxic under ordinary use conditions are antibacterials, soaps and surfactants, silicones, PVP, and many others. Dr. Snyder named a number of personal formulated products which were submitted to most stringent percutaneous toxicity tests on laboratory animals and were found negative. Among this group were shampoos in 10

per cent concentration applied at the rate of two grams per kilo of body weight a day, which corresponds to 20 to 50 times the normal use dosage.

All speakers emphasized the importance of corroborating by use tests on human volunteers all screening tests on laboratory animals and on excized skin. They stressed the growing need for stringent evaluation methods of cutaneous and percutaneous effects.

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These nonionic surface active agents are effective dispersants, emulsifiers, wetting agents and detergents in all types of application. They offer unusual solubility values and results in the presence of acids, alkalis and polyvalent metallic salts.

The Poly-Tergent surfactants are available in three different compositions, each with a range of ethylene oxide content-J Series, polyethoxylated tridecyl alcohol; G Series, polyethoxylated octyl phenol; B Series, polyethoxylated nonyl phenol.

NEW-Technical data sheets are available on all of the Poly-Tergent surfactants. Write for information and samples.



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FMC Creates Ad Dept.

The establishment of an advertising and publicity department for the chemical divisions of Food Machinery and Chemical Corp., New York, was announced last month by J. V. Vernon, corporate vice-president. The company's chemical divisions include Westvaco Mineral Products, Westvaco Chlor-Alkali, Becco Chemical, Chemicals and Plastics, and Niagara Chemical.

Desmond M. C. Reilly has been named manager of the new department which will provide advertising, technical and sales literature, and product and personnel publicity services to each of the divisions. Formerly manager of advertising and technical information in the chemicals and plastics division since 1957, Dr. Reilly was a technical writer and manager of sales promotion and publicity in other chemical divisions from 1953 to 1957. Robert B. Rumely has been appointed assistant manager for publicity in the new department. He was formerly public relations representative for the chemical divisions. Newly named assistant manager for advertising is Don Hanson who had been assistant advertising manager in the Niagara chemical division since 1958.

— ★ Millmaster Moves Offices

Millmaster Chemical Corp. and Millmaster International, Inc., moved its executive offices early last month to 99 Park Ave., New York 16. The new telephone number is Murray Hill 7-2757. Millmaster was previously located at 295 Madison Ave. in New York. The companies are distributors of industrial and agricultural chemicals, intermediates, fine chemicals, and pharmaceuticals.

Alexander Boyle Dies

Alexander R. Boyle, 71, who retired in 1957 as treasurer and a director of Lehn & Fink Products Corp., New York, died at his home in Darien, Conn., Sept. 10. He had been with Lehn & Fink since 1925.

USI Advances Kilmer

Walter J. Kilmer has been appointed manager of the Detroit sales division of U. S. Industrial



Fred M. Henley

Chemicals Co., New York, it was announced last month by Alden R. Ludlow, Jr., vice-president of sales. He succeeds Fred M. Henley, who will retire.

With U.S.I. for the past 25 years, Mr. Kilmer served most recently as a sales representative in Buffalo, N. Y.

Miles Joins Shulton

Leon M. Miles has joined Shulton, Inc., New York, as a product manager, it was announced last month by Richard N. Parks, vice-president of sales. In his new post Mr. Miles plans and coordinates the marketing programs for several new products now being prepared for marketing. Previously he was marketing supervisor for Needham, Louis & Brorby, Inc., Chicago advertising agency.

Tallow, Lard Exports Rise

Exports of lard during the first half of this year amounted to 274 million pounds compared with 195 million pounds in the corresponding 1958 period, or an increase of 40 per cent, according to a report by the Foreign Agricultural Service. Shipments of inedible tallow and greases for the period rose by 16 per cent from 557 million pounds last year to 647 million pounds in 1959.



A <u>New</u> Water-Miscible Germicide

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- Emulsifying and detergent properties, mild, pleasant odor, wide compatabilities and economical.
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National PCA to Meet Oct. 19-22

FINAL program plans were being completed late last month for the 26th annual convention of the National Pest Control Assn. which will be held at the Buena Vista Hotel and Motel, Biloxi, Miss., Oct. 19-22. About 500 to 600 pest control operators are expected to attend the convention at which there will be approximately 40 exhibitors.

Preliminary events for the convention begin Friday, Oct. 16th when the association's executive board meets and Saturday, Oct. 17th when the board of directors meets. On Sunday, Oct. 18th, committee meetings will be held including the technical; insecticide; roach control; termite control; insurance; public relations; sanitation; safety; advertising; bird management; business; equipment; fumigation and statistics committees.

The convention proper gets underway Monday, Oct. 19th, with a business meeting in the morning at which NPCA president Wayne K. Davis of Ailing House Termite Control Bureau, Oakland, Calif., will speak and Dr. Ralph E. Heal, executive secretary, will give his report. A featured speaker at the meeting will be Dr. John Osborne of Purdue University who will discuss his recent trip to the Soviet Union with a Department of Agriculture team. Two open forums have been scheduled for Monday afternoon, one dealing with the pest control industry's transportation problems, and the other a discussion of annual residence pest control service on a contract basis. Committee reports will be heard on Tuesday, Oct. 20th, and later that day H. A. U. Monro of the Science Service of the Canadian Department of Agriculture will speak on fumigation. Wednesday morning, Oct. 21st, there will be an open forum discussion session of termite pre-construction treatment. This will be followed by a general participation clinic on business management in the pest control industry.

Hamilton Laudani of the agricultural marketing service of the U.S. Department of Agriculture will discuss "Residues in Feed," and Howard A. Merrill of the Department of the Interior's Fish and Wildlife Service will give an address titled "Report on Rodent Control," Thursday morning, Oct. 22. Also on that day the NPCA statistics committee will make a report. Later R. J. Kowal of the U.S.D.A.'s Southeastern Forest Experiment Station, Asheville, N. C., will discuss the development of proper relations between industry and government employees on technical problems. There also will be technical committee reports. The afternoon of Oct. 24 there will be a general question and answer session of industry problems. Drawings for exhibitors' prizes will follow. Wind-up of the convention sessions will be the annual business meeting, when officers will be elected. Thursday evening a banquet is scheduled with Clayton Rand, author and editor, of Gulfport, Miss., as featured speaker. Members of the new board of directors for the coming year will meet on Friday, Oct. 25.

Polyvinyl Names Stankus

R. J. Stankus was appointed to the research laboratory staff of Polyvinyl Chemicals, Inc., Peabody, Mass., last month. Previously a member of the laboratory staff of Rohm & Haas Co., Philadelphia, he has been assigned to Polyvinyl Chemical's application development research group.

Colgate Appoints Orgel

The appointment of Gerald Orgel as a radiobiologist in biological research laboratories at New Brunswick, N. J., of Colgate-Palmolive Co., New York, was announced last month by Joseph H. Brant, director of corporate research.



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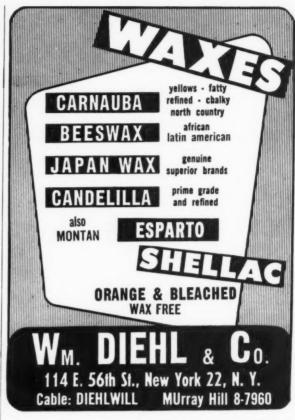
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Avon Reports Record Sales

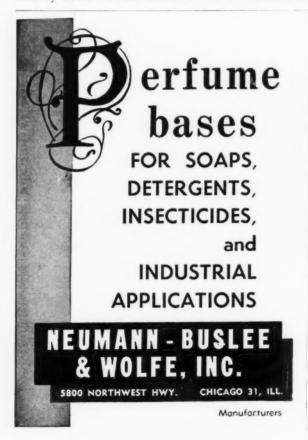
Record sales and earnings of Avon Products, Inc., New York, and its subsidiaries were reported last month for the first half of this year. Consolidated net sales for the six months ended June 30th amounted to \$59,615,124, an increase of 22.4 per cent over the \$48,720,693 reported for the corresponding 1958 period. Net earnings for the half in 1959 reached \$5,658,372 compared with \$3,477,212 last year.

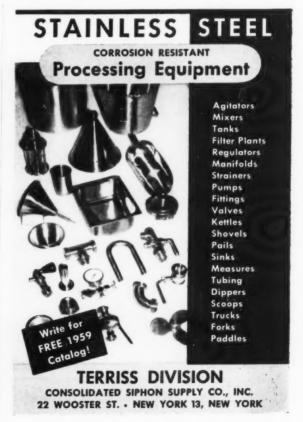
Texas Raises Excise Tax

The state excise tax in Texas was raised recently to 2.2 per cent of a retail selling price and is payable on retail sales. Items sold to barber and beauty shops and similar establishments for their own use are exempted from the tax. However, the tax is imposed if these establishments resell the items. Also exempted are items sold for baby care and as miniature samples for demonstration by house-to-house salesmen.



Highlight of last month's Canadian National Exhibition in Toronto, was the display of G. H. Wood & Co., Toronto, which emphasized the loss from preventable illness and the increasing need for sanitation in business and industry. One million dollars, estimated as the daily cost of industrial absenteeism caused by sickness, was displayed in every denomination of Canadian bills and coins. In addition a quantity of Canadian gold bars, some of which weighed 400 ounces and are valued at \$14,000 each were shown at the mammoth Wood display booth. In the photograph, Mr. Wood, second from left, is shown with representatives of the Canadian Bank of Commerce (and the million dollars).





Speckhals Joins Colgate

Kenneth H. Speckhals has joined the evaluations section, household products research and development department, Colgate-Palmolive Co., New York, it was announced last month by Richard B. Wearn, director of research for the household products division. Mr. Speckhals came to Colgate directly from the University of Pittsburgh where he received his B. S. degree in chemical engineering.

Valchem Appoints Two VPs

Ernest St. Louis has been named vice-president of chemical manufacturing and Peter Benjamin has been appointed vice-president of sales for Valchem, Langley, S. C., chemical manufacturing unit of United Merchants and Manufacturers, Inc., New York, it was announced last month by J. W. Schwab, president of the parent firm. Valchem, under the supervision of J. W. Houth, vice-pres-



The "Own a bit of America" label, redeemable for one free U. S. savings deemable for one free U. S. savings stamp, is displayed on a package of "Bab-O" scouring pads from B. T. Bab-bitt, Inc., New York. The company was the first to participate in the coupon program which was launched early last month at a ceremony in front of the Sub-Topagury building in New York Sub-Treasury building in New York marking the 170th anniversary of the York founding of the Treasury Department.

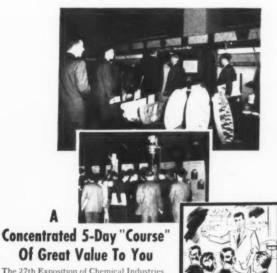
ident of United Merchants and general manager of the finishing plants division, manufactures almost all of the organic chemicals used by various United Merchants organi-

Aniline Branch to Move

The Philadelphia branch of the National Aniline division of Allied Chemical Corp., New York, is being moved this month to new offices at 171 East Hunting Park Ave., in that city. Robert A. Hoffman, newly appointed branch manager, said the new offices provide more space, a new customer service laboratory, and permit all warehousing on one floor. The branch was previously located at 200 South Front St.

James Heekin Dies

James J. Heekin, 87, board chairman of Heekin Can Co., Cincinnati, died Sept. 7. He had been president of the company from 1924 to 1928, when he was elected chairman. His father, the late James Heekin, founded the concern in 1901. James J. Heekin also was chairman of Heckin, Inc., Cincinnati, baking powder makers.



The 27th Exposition of Chemical Industries offers a "curriculum" filled with the latest developments in the chemical process in-dustries. See over 500 informative displays of new and improved materials, equipment. methods and the latest in automation. There are special sections for chemicals and labo-

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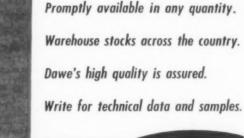
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Western Filling Corp.	152
Western Petrochemical Corp.,	
Warwick Wax Division	110
Westvaco Chlor- Vlkali Div.	
Westvaco Mineral Prods, Div	
Wisconsin Alumni Research Found	
Witco Chemical Co.	190
Wyandotte Chemicals Corpo), (1)

COMING MEETINGS

Aerosol Clinics (sponsored by Aerosol Division of CSMA), New York City, Oct. 17, Hotel McAlpin. Chicago, Oct. 24, Hotel La Salle.

American Oil Chemists Society spring meeting, Baker Hotel, Dallas, April 4-6, 1960.

Association of American Soap & Glycerine Producers, 33rd annual convention, Waldorf-Astoria Hotel, New York, Jan. 20-22.

Canadian Manufacturers of Chemical Specialties, second annual meeting, Royal York Hotel, Toronto, Nov. 2-4.

Chemical Specialties Manufacturers Association, 46th annual meeting, Mayflower Hotel, Washington, D. C., Dec. 7-9; 46th midyear meeting Drake Hotel, Chicago, May 16-18.

National Agricultural Chemicals Association, 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind., Oct. 21-23.

National Hotel Exposition. 44th annual show, Coliseum, New York, Nov. 2-6.

National Packaging Show, Convention Hall, Atlantic City, N. J., April 4-8, 1960.

National Pest Control Association, annual convention, Biloxi, Miss., Oct. 19-22.

National Sanitary Supply Assn. 37th annual convention, Fontainebleau Hotel, Miami, Fla., May 22-25, 1960.

Packaging Institute, 21st annual forum, Statler Hotel, New York, Nov. 17-19.

Packaging Machinery Manufacturers Institute, show, Coliseum, New York, Nov. 17-20.

Plant Maintenance & Engineering Show, Convention Hall. Philadelphia, Jan. 25-28.

Society of Cosmetic Chemists, New York Chapter, monthly meetings, Hotel New Yorker, Nov. 4, Jan. 7.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, Nov. 4: and Dec. 2.

Toilet Goods Association. scientific section, Waldorf-Astoria Hotel, New York, Dec. 1, 1959; May 11, 1960. 25th annual meeting, Poland Springs House, Poland Springs, Me., June 27-29, 1960.

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3. Detergent Evaluation and Testing by Jay C. Harris.

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4. Soap Manufacture by Davidson, et al.

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THE death last month at 55 of John Thomas Stanley, secretary of John T. Stanley Co., old-line New York soap firm, once again raised the question of who is who in the Stanley family. John Thomas, or "young John" as he was known at Stanley, was a grandson of the founder, John T. Stanley, who died in January, 1935, at age 93. The founder had two sons, John W. and Alfred T. John W., father of "young John," was vice-president of the firm until his death in June, 1954, at 83. John W's brother, Alfred, who is 91, is currently president of John T. Stanley Co. He has been with the firm for 74 years. This Alfred and another Alfred T. Stanley, younger brother of the late John Thomas, are the only male Stanley survivors. John's brother Alfred operates Quaker Soap Co., a Secaucus, N. J., rendering firm. which is a wholly owned subsidiary of John T. Stanley Co. To Nils K. Dahl, vice-president and general manager of Stanley, we are indebted for straightening us out on which Stanley is which.

The most unusual cocktail party in history! A cocktail party at the St. Moritz Hotel in New York without cocktails or any other kind of boose. It happened during the board meeting of the Chemical Specialties Manufacturers Assn. at the St. Moritz. The party was scheduled for Sept. 15 which turned out to be primary election day in N. Y. State which means no liquor served or sold anywhere from 3 P.M. until 10 P.M. So about 100 guests of CSMA ate canapes and drank non-alcohol fruit punch. (Some sneaked away to their hotel rooms and returned looking much more chipper.) All told, it was a most sober and dreary affair.

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Did you notice the "SOS" soap pads and a package of P&G's "Dash" low-sudsing detergent in the AP radiophoto of the model American kitchen at the U. S. Exhibit in Moscow's Sokolniki Park in your newspaper last month? Another newspaper picture that caused a ripple in the chemical specialties business early in August was a photo of a Princeton, N. J., chap who spent two weeks with his family in an atomic bomb shelter. A can of "Florient" deodorant standing on a shelf in the shelter may be seen quite clearly in the photograph.

Hats off to Dodge & Olcott! This month D&O, which undoubtedly is the oldest company in America specializing in the manufacture and sale of essential oils, aromatic chemicals, awors, perfume bases and related products, celebrates its 161st anniversary. General offices and laboratories of D&O are located at 180 Varick St., New York City.

A recent announcement from Ken Voorhees, prez of Ungerer & Co. that they had appointed F. J. Hailer, Jr. to represent Ungerer in the New England territory to succeed the late Warren G. Kell made us realize that we are getting old. Now, Florey, Jr. is no longer a kid, but when we harken back to the early days of his well-known dad, Florey, Sr. — now retired and doesn't like it, — when he directed purchasing for Liggett (nee United Drug), we realize how many years have flown by. The second generation has indeed taken over.

"The Fleas of New York" is the subject of a new bulletin issued by the Cornell University Agricultural Experiment Station and written by John M. Geary. We never knew it, but apparently New York State has its own particular species of fleas—differing from New Jersey fleas, California fleas, etc. We note with interest that N.Y. fleas are stored by collectors in alcohol. Rather an appropriate medium for N.Y. fleas we surmise. Anybody who wants to see a copy of this flea document write for Memoir #355, Ithaca, N.Y.

A seven-day, all-expense trip to Paris was the prize won by five Lentheric salesmen for being the company's top sales team. The five salesmen, all from the western division of Lentheric, were: Don Hoffman, Jim Anderson, Ted Lilyblade, Ed Maria, Ir., and Iim Howard. The trip gave the men and their wives a chance to become acquainted with the city where their company was founded by the famous perfumer, Guillaume Lentheric, in 1885. How were the Follies, boys?

Know where Adell ("Lestoil") Chemical Co. of Holyoke, Mass., got its name? From president Jacob Barowsky's wife's first name, Adeline. This and other tidbits, viz. Colgate once offered Mr. B. \$25 million for Adell, are contained in an article. "Togetherness, Inc: The Barowskys of Holyoke" in the July issue of Television Magazine.

"Stripe" toothpaste of Lever Brothers Co, is now being marketed in Britain by Unilever under the trade name "Shield." Introduction of this dentifrice in the U.K. is termed by "experts" there a "surprise" since 1959 first half sales are down from '58, when they hit an estimated 12 million. Last year British dentifrice sales were double what they had been in 1952. What surprises us most is why Unilever didn't adopt the more descriptive and certainly more exciting name of "Stripe."

Shades of "Ivory" soapl G. H. Packwood Mfg. Co., St. Louis, announced to the world, or at least part of it, last month that its "Pax-Lano-Sav" granulated skin cleanser (heavy duty) is "99.6% effective in removing radiological contamination from the skin." "Ivory," of course, is "99.44% pure."

TAKING HORACE GREELEY'S ADVICE: Jim and Mrs. Puleo wave farewell to New York as they prepare to fly to a new home and a new job (for Jim) in Los Angeles. A long-time vice-president in charge of the New York office of Bobrick Dispensers, Inc., Los Angeles, Jim has been advanced to a new position. He is now responsible for production supervision of all dispenser manufacturing for Bobrick. He has been with the firm since 1927 and in his previous position since 1947. Before that, he served in many capacities including production and sales. Jim is a native New Yorker, whose homesickness will be relieved somewhat by the fact that he will now have an opportunity to go out and cheer for some ex-neighbors of his—the "Los Angel's Dodgers."



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